

THE AMERICAN FARMER

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OREGON EXPERIMENTS

In Fattening Pigs on Wheat.

From the Kansas Bulletin.
In September, 1891, Prof. H. T. French, Agriculturist to the Oregon State Experiment Station, at Corvallis, undertook a pig-feeding experiment in which wheat figured prominently as one of the food stuffs. Previous to the beginning of the experiment questions bearing on the subject of pig feeding were submitted to 75 leading farmers. From the answers to these questions it appears that wheat has been employed in Oregon as a fattening food for swine for many years, and that it is now more commonly fed than any other grain.

The experiment was conducted with

smaller gains than from either whole or ground wheat.

A cross comparison between the results obtained from whole wheat and from ground wheat is interesting. The first lot of pigs weighed 410 pounds when the feed was changed from chopped oats to ground wheat. During the next 60 days they gained 222½ pounds. The second lot weighed 445 pounds when the ration was changed from whole oats to whole wheat, and during the next 60 days made a gain of 179 pounds. The 222½ pounds of gain on ground wheat was made at a cost of 1,017 pounds of food, or at the rate of 4.6 pounds of food to a pound of gain. The 179 pounds of gain on whole wheat was made at a cost of 1,087½ pounds, or at the rate of 6.1 pounds of food to a pound of gain.

Figure 1 is a reproduction of a photo-

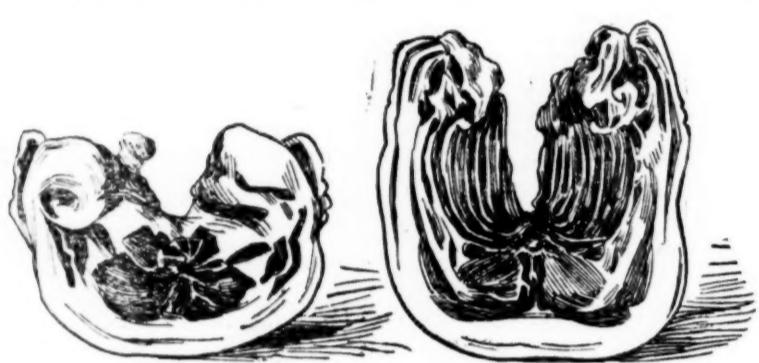


Fig. 1.—Weight of hog 286 pounds. Fed on Mixed Ration 120 days.

six fine and uniform Berkshire pigs, purchased, and weaned by an accident to the sow at four weeks of age, and kept in a thrifty, growing condition by liberal rations of kitchen slops and shorts, but no green food. For the purposes of the experiment the pigs were divided into three lots of two each, consisting of a sow and a barrow.

The first lot was fed chopped oats for two months; then ground wheat for two months. The pigs were weighed every two weeks to determine the gain made. The two pigs weighed, at the beginning of the experiment, 302 pounds. During the first two weeks, on chopped oats, they gained 11 pounds; during the second two weeks, 36 pounds; during the third two weeks, 27 pounds; and during the fourth two weeks, 34 pounds.

At this point the feed was changed to ground wheat, and a marked acceleration in the rate of gain resulted. During the first two weeks on the ground-wheat ration, the two pigs gained 67½ pounds; during the second two weeks, 60 pounds; during the third two weeks, 66 pounds; and during the fourth two weeks, 10½ pounds.

The total gain for 60 days on chopped oats was 108 pounds, or nine-tenths of a pound a day for each pig. The total gain for 60 days on ground wheat was 222½ pounds, or almost two pounds a day for each pig. Of oats, the pigs consumed 58½ pounds, and of wheat, 1,017 pounds. Of oats, it took 5.4 pounds to make a pound of gain, and of wheat, it took a trifle less than 4.6 pounds.

A second lot of two pigs was fed on whole oats for 60 days, and then on whole wheat for 60 days. In the case of this lot the difference in favor of wheat over oats was much less marked; indeed, from the standpoint of the relation of food to gain, it had disappeared altogether. The pigs weighed at the beginning, 316 pounds. During the 60 days that they were fed on whole oats they gained 129 pounds, or a trifle more than a pound a day for each pig. During the 60 days after the feed was changed to whole wheat, they gained 179 pounds, or 1½ pounds a day for each pig. Of oats, they consumed 732 pounds, and of wheat, 1,087½ pounds, making the quantity of oats necessary

between wheat and the mixture, the two pigs to be fed wheat weighed, together, 544 pounds, and the lot to be fed the mixed ration weighed 592½ pounds. At the conclusion of the experiment, 12 weeks later, the wheat-fed lot weighed 941½ pounds, and the mixture-fed lot weighed 871 pounds. The wheat-fed lot gained 397½ pounds, at a cost of 2,022 pounds of wheat. As the wheat was valued at 45 cents a bushel, the cost of each pound of gain was a very small fraction less than 4 cents.

It is worthy of note that, in butchering, the shrinkage of the mixed-ration lot was 15 per cent. of the live weight, and of the wheat-fed lot only 13 per cent.

Figure 2 is an engraving from a photograph of a cross section of the carcass of one of the wheat-fed pigs, and figure 3 of a cross section of the carcass of one of the pigs fed on the oats-wheat-shorts mixture.

COTTON.

Cost of Growing in the United States.

The following particulars, in view of the controversy that is continually going on as to the cost of production of American cotton, will, says a writer to the *Liverpool Daily Post*, be of general interest to the cotton trade. The items relating to Texas were collected personally during my residence in central Texas last season:

Cost of production in Texas per acre to yield on an average, say, 250 pounds lint, and present prices in Liverpool:

Expenses.
\$4.00 Rent per acre.
2.75 December and February breaking.
0.25 Manure and cotton seed.
2.00 Plowing four times.
0.62 Chopping after second plowing.
0.50 Hoeing out after chopping.
4.50 For seed cotton, 100 pounds of cotton seed at 60 cents per 100 pounds.
0.75 Marketing.
17.12 Ginning, baling, bagging and ties.
17.12 Less proceeds of cotton seed sales.

\$14.00 Cost per pound 5.65 cents.

In confirmation of the above, I copy from the "Agricultural and Mechanical College of Texas," published in March, 1893, the following statements from five cotton farmers, as to the cost of production per pound for cotton sold at

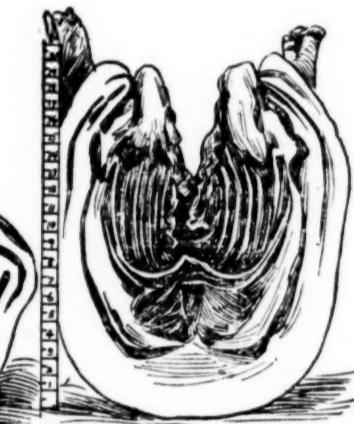


Fig. 3.—Weight of hog 403 pounds. Fed on oats Wheat and Shorts 12 weeks, at the same station in 1892. In this experiment pigs weighing 300 pounds each made considerably better gains on ground wheat than on a mixture of chopped oats, wheat and shorts, two pigs in four weeks gaining 147 pounds on the wheat ration, and two others of similar weight and equal thrifit gaining but 124½ pounds during the same period on the mixture. During these four weeks it took 4.44 pounds of wheat to make a pound of gain, while it took 5.25 pounds of the mixture.

As the pigs grew heavier the showing in favor of clear wheat was more marked. During the second four weeks' period the two pigs fed on wheat made a gain of 139 pounds, and the two on the mixture but 94½ pounds. The wheat-fed lot required 4.94 pounds

of feed for each pound of gain, and those fed on the mixture required 6.35 pounds. The results of the third four weeks' period were 114 pounds of gain for the wheat-fed lot and 59½ pounds for the mixed-ration lot, the former requiring 5.97 pounds of feed for each pound of gain, and the latter 9.03 pounds.

At the beginning of the trial as be-

AGRICULTURE IN BABYLONIA

The Same Methods There as Thousands of Years Ago.

BY JOHN C. SUNDBERG, CONSUL AT BAGDAD.

In ancient times, when the whole of Babylonian Mesopotamia and the greater portion of the tract intervening between the Tigris and the mountains of Persia and Kurdistan were artificially irrigated, this region held the principal granaries of the world. Such was the fertility of the soil that, according to Herodotus, it yielded commonly two hundredfold, and sometimes three hundredfold. Now, agriculture, as well as all other industries, is in a deplorable state, and the yield of both wheat and barley is said to average but twentyfold—less than 5 bushels of the former and not much more of the latter being produced per acre.

For the correctness of this statement, however, I do not like to vouch, as on no subject is reliable information obtainable here. Indeed, a dozen grain merchants, both Europeans and natives, of

who have resided here any length of time. To me it is extremely unpalatable.

Farmers are taxed 10 per cent. of their crops, and 20 per cent. if the crops are produced without irrigation. Vegetables are taxed similarly. Date trees are taxed 1 piaster (4.4 cents) per tree, and 2 piasters if irrigation is dispensed with. Other taxes must be paid every time the products are moved.

The quantity of grain exported varies

greatly from year to year. In 1889,

200 cts. (373 bushels) of wheat were

shipped to England. This year the

crops have been almost totally destroyed,

and there will probably be nothing to

export, though last year's crops, of which

but little has been sold, will prevent a

famine.

As population increases, Iraq, or

Babylonia, will again become one of the

leading food producing lands. The an-

cient irrigation canals can easily be re-

stored, and this will relieve the Spring

pressure of water in the rivers and pre-

vent inundations. If trees were then

planted along the banks of the canals, it

would probably change the climate by

increasing the rainfall and distributing it

more evenly throughout the year,

which would again lower the extreme

Summer heat and equalize the tempera-

ture. With intelligent encouragement

given to agriculture, this whole region

could be converted into a garden. By

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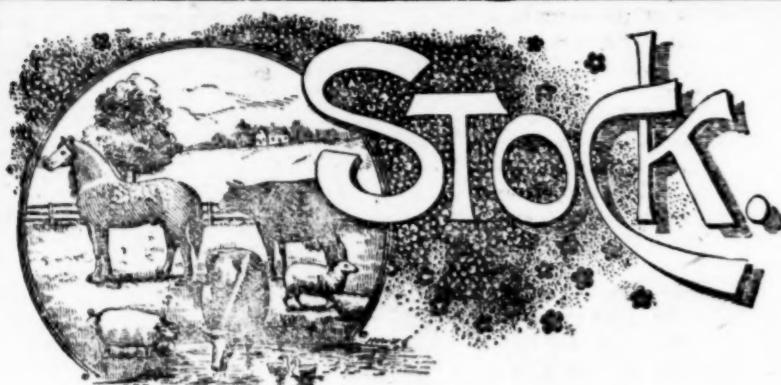
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Yard Echoes.

A feed cutter will more than pay for itself in one Winter. It will pay well to cut all rough stuff fed animals, especially corn stalks.

Young animals and their dams always require extra care at a change of season, and they should be well looked after as the weather increases in severity.

To get rid of lice, or any other kind of small insect vermin, apply a mixture of oil and kerosene in equal parts, and brush it well into the skin and hair. To give sulphur liberally will have the same effect, because it is thrown off by the animals through the skin, and thus kills the lice, but it is a dangerous remedy, as it opens the pores of the skin, causing perspiration and risk of taking cold.

Hadley 27105.

The subject of the illustration was farrowed February, 1891; sired by the great breeding hog, One Price 18639, he by Black U. S. He, as well as his dam, was bred by his present owners, Ed. Klever, Hadley & Hendrick, Bloomingburg, or Wilmington, O. Hadley 27105 was second prize winner at the great Columbian Hog show at Chicago last Fall. About 50 of this firm's exhibit at Jacksonville, Ill., Fair last month were sired by this hog. Hadley 27105 has an extra fine head and ear, heavy ham and fine arched back, short head and neck, fine style and finish. He has also proved to be an extra breeder.

Worms in Horses.

In the horse two kinds of intestinal worms are very common; they both belong to the genus ascaris, and are known as the round worm, which dwells in the intestines proper, and the thread worm, which lives almost exclusively in the rectum. The former is not unlike the common earth worm in size; the latter is much smaller and resembles in size and color a piece of white thread an inch or so long. This no doubt is why they are so popularly known as pin-worms.

For thread or pin-worms the treatment should be by injections; of these one of the following may be selected: No. 1. Oil of turpentine, 2 drs.; linseed oil 1 pint; mix and use every morning for one week. No. 2. Common salt $\frac{1}{2}$ ounce; carbolic acid $\frac{1}{2}$ dr., water 1 pint; mix and use every other day for a week. A strong decoction of tansy, or of almost any vegetable bitter, will also dislodge the worms.

Corns on Horses.

EDITOR AMERICAN FARMER: We have a mare badly affected with corns in the feet. At times she is all right, and at other times she goes lame; not so much on soft ground, but more so on the hard road.

If a corn is known you would confer a favor by giving information through your valuable paper as to the cure and the way of applying it.—GEO. HOPPE, David City, Neb.

The first thing to look after is the shoeing. Unskillful horse-shoers are responsible for most of the corns which afflict horses. You will probably find that the shoes have been shifted from the proper position, or probably never placed there. Remedy this, cut out the corns carefully with a very sharp knife and then touch places with sulphuric acid. See that the shoes bear evenly, and on the wall of the foot only.—EDITOR AMERICAN FARMER.

Cheap Horses.

Horses are very cheap in Oregon just now. A herd of 800 head, just off the range, were sold at an average price of \$5 each recently, and a few days ago, at a sale of fine stock near Portland, a splendid matched team of sorrel mares were sold for \$40, and a big bay horse brought only \$22.50. Half a dozen years ago such horses would have sold ready for \$100 to \$150 each.

The Hay Crop.

In 1870 the hay yield of the United States was 24,522,000 tons; in 1880 the yield was 31,925,233 tons; in 1893 it was 65,766,158 tons, worth \$570,882, 872, or more than double the value of the cotton crop; more than twice the value of the wheat crop; nearly 15 times greater than that of the tobacco crop, and within a fraction of the corn crop of 1893, which was \$590,000,000.

Stable Talk.

Horses should not be allowed to come run down now, even if their services will not be in much demand during the next few months. Give them the best of treatment, for no amount of idleness will enable the equines to recuperate from the severe strain they have lately been subjected to unless they are properly taken care of and liberally fed.

If you want a first-class self-regulating Incubator and Brooder, one that has a record of Hatching 98 chicks out of 105 un-hatched eggs, and 56 chicks out of 60 eggs original, address G. W. Murphy & Co., Quincy, Ill. Circulars free; 2 cents for illustrated Catalogue.

SHEEP AND WOOL.

Shearings.

The earlier agricultural writers of this century, seeing the strong tendency towards merino sheep, discouraged the production of fine merino wool and insisted upon the production of the coarser grades, which the common people used most.

An experienced sheep raiser in Missouri advocates some sort of a mutton cross in all flocks, and writes:

"I have in my flock the Southdowns and Oxfords, also some Southdowns with a light touch of Merino blood, and for quick growth and early fattening I find the latter is far ahead of either of the others."

An Old Remedy is as Good as a New.

A simple and effectual method of preventing the destruction of sheep by wolves was communicated to the Society for the Promotion of Useful Arts in the State of New York, by Ezra L'Hommedieu, Vice-President of the Society.

Mr. Walter Briggs, a respectable farmer in Scholiarie, who keeps a large number of sheep, informs me that he loses none of them by wolves, which are plenty in that part of the country, and cannot be driven off or destroyed, except by traps. He makes an ointment, composed of gunpowder and brimstone, powdered fine and mixed

the wool on them, and form, like the skins of the Persian sheep, very comfortable Winter clothing. The inhabitants of Tibet are too indolent to take any advantage of the excellent materials which their country produces, and a considerable proportion of their wool is sent into Persia and British India to be manufactured.

The flesh of the Tibet sheep is said to be peculiarly well-flavored, but the inhabitants mostly eat it dried and raw. It is said, however, that when cured in the frosty air, it is not disagreeable to the most fastidious European palate.

The Tibet sheep are occasionally employed as beasts of burden. Capt. Turner says, that he has seen whole flocks of them in motion, laden with salt and grain, each carrying from 12 to 20 pounds.

It is well to say that the prices asked for these dressed pelts indicated the profitability of these sheep over and above their value as meat-producing animals. There is not much danger of their becoming popular in this country, other than as curiosities, which they certainly would be to us all.

The Cause of Matted Fleeces.

What is known as matted or cotyled fleeces has long been a mystery and annoyance with the sheep raiser. The following from an exchange gives very sensible reasons and suggestions on the subject, which will enable the farmers to guard against this annual loss of values in their fleeces:

"Inquiry into the cause of matted wool in sheep having been made by a large company who trade in that commodity, has elicited the following remarks from the author of a work on the technical structure of wool fiber. The causes usually ascribed are continuous wet weather, poor feed, and heredity. The real root of the evil, however, is the failure of the sheep to produce a sufficient quantity of suint or yolk, which acts as a lubricant, and prevents the scales on the surface of the fibers from interlocking, thus causing the fibers to mat together. The tendency in individual sheep may arise from any of the following causes:

"1. Poor-bred sheep are always more liable than well-bred ones, because the fibers are much coarser, and the production of suint much less. This will account for what you have noticed when the sire has not been of first-class breed. These peculiarities are transmitted in the offspring. It is also more noticeable in long-wooled sheep, than in Merinos or Southdowns, because the production of suint in the short-wooled is much greater in proportion than in the long-wooled, and the fleece is more impervious to water.

"2. Wet weather may also influence this, because it washes out the suint, which is more or less soluble in water, and thus leaves the fibers in the condition most ready to mat; and the same thing applies to damp and marshy ground; also, if the sheep are washed too frequently, and at times when they cannot dry, the matting is almost sure to take place.

"3. A poor feed will have the same result, because whatever causes the condition of the sheep to fall off prevents the production of this suint, and hence the fiber becomes dry and harsh, and in addition to this the sheep will be probably more restless, and so the tendency to mat will be greater.

"4. If the sheep have not been properly dipped, so that they are covered with vermin or scab, or any other skin disease, which renders the sheep restless, and at the same time checks the production of this suint, and thus contributes to rendering the fiber more liable to mat; and the restlessness of the sheep secures that this is done. Careful attention to the health of the sheep, to the purity of the breed, and to the sheltering of the sheep in implement weather, is the best preventive to matting."

Remarks: On the above subject I recall the experience of one of the best scrub breeders in Waukesha County, Wis. He had an imported Cotswold, which had been raised by hand—a cosset—and had always run with the hogs, eaten with them, and slept with them. She was dissatisfied if obliged to be away from the hogs, and confined with sheep. She was a show sheep and used for that purpose. Every year her fleece was "cotted" and of lessened value. At three years old she was in lamb, and had to be separated from the hogs, and this year her fleece was not "cotted." He believed it was caused by the dust and sleeping in the hog house during the Winter. Her lambs were not subject to fleece matting.

Sheep and the Future.

The end of scrub flocks, the end of scrub flockmasters may be at hand, but not the end of American sheep husbandry. This has come to stay, and on safer, broader, more progressive and better conceived principles than have been practiced, save by the few.

When the reconstruction has been completed, as it will be in a year or two, it will be seen that greater progress has been made in 1894, than in any decade of the past history of sheep raising in this or any other country of the world.

We do not protest to know much, but we are willing to go on record with this prognostication of the future of sheep raising.

Mediterranean Wheat.

J. D. Hyatt, Hyatt, N. C., wishes to obtain some of this old-fashioned wheat. Who raises it?

Consumption Cured.

TO THE EDITOR—Please inform your readers of a positive remedy for the above-named disease. By the way, thousands of hopeless cases have been permanently cured. I shall be glad to send two bottles of my remedy free to any of your readers who may have any Lung Trouble or Consumption, if they will send their express and postoffice address. A. T. Slocum, M. C., 133 Pearl street, New York.

The Traveling Flocks of Spain.

There were two systems of handling Merino sheep in Spain. So distinct were these that the flocks were called Transhumantes or traveling flocks, and Estantes or stationary flocks. The traveling flocks belonged to the King and his courtiers and the clergy. Their owners were of the royal blood, and it was supposed their sheep had some superiority of breeding that the stationary flocks had not. As competent an authority on the subject as Mr. Livingston shows that the wool of the stationary flocks was not inferior to that of the migrating sheep.

The two systems practiced in Spain would somewhat correspond with the pastoral and farm systems as are found in this country to-day. The migratory plan of handling sheep was used by the patriarchs and earlier sheep-keepers. So far as we know there may have been more system in the management of the Spanish migrating plan than was known to the early shepherds. There can be no question as to the uniform practice of leading the Transhumantes from the south of Spain, their Winter pastures, to the mountains of the north, some four or five hundred miles, to their Summer pastures. Let us examine this way of handling a flock and learn the details. We will follow the sheep, shepherds, dogs and donkeys from the mountains to the plains of Estremadura, where the flock is to remain until April or May, depending upon the season and the pasture that is to maintain the flock on the journey. When the severe weather commences upon the mountains, the shepherds prepare to depart, which is generally about the end of September and throughout the month of October, to seek more temperate climates and fresher pastures. They generally travel about five to six leagues a day—15 to 18 miles—and stop occasionally in the pastures prepared for them.

These pastures were provided by the Government, and without consent of the people; nor were the people permitted to use them; on the contrary, they were compelled to protect them from the intrusions of stock. The head shepherd precedes, and the rest flank or follow the flock to collect the stragglers. The shepherds carried everything with them that they were expected to need.

Here is a brief list of their outfit: The skins of sheep served for their beds, a kettle, a leather bottle, a knapsack, a spoon, a lancet to bleed their sheep, a scissars, a hatchet, a knife, and bread and oil or suet, on which they subsist, and a few drugs for their sheep. These, with the skins of those sheep that die on the passage, are carried by a few beasts of burden which accompany the flock. To facilitate the march, a number of wethers of the largest size, which they call mausos, are rendered very tame.

These wear bells, and are taught to obey the signals of the shepherds, and either march or stop as they direct. The rest of the flock follow their leaders. As soon as they arrive at their Winter quarters, the shepherd's first care is to form the pens in which they are gathered at night to protect them from the wolves, who always migrate with the sheep in order to pick up the sick, the weak, or the stragglers. These folds are made of a soft, rushy shrub; mats, baskets and ropes are made of it also. The meshes of these net inclosures are one foot wide. The dogs, which are of a large breed, serve to guard this fold at night.

The shepherds make their own tents with stakes, branches and brambles, and have for this purpose a right to take one branch from every forest tree. Ten thousand sheep compose a flock, under the direction of one chief, and this is divided into 10 tribes. The head shepherd has absolute dominion over 50 shepherds and as many dogs, five of each being annexed to a tribe. His salary is about \$200 a year, while that of the first shepherd of a tribe is only \$10, the second \$8, the third and fourth still less, and a boy only \$2.50. Their daily allowance of food is two pounds of bread, and as much to each dog. They may keep a few goats or sheep, of which they have the meat, but not the wool. They receive as a gratuity about six shillings in April, and as much in October, by way of regale. On the road they are every day, at all seasons, exposed to the air, and at night have no shelter but their miserable huts. In this way live to a considerable age the 25,000 men that compose the shepherds in Spain.

The flocks consist of rams, ewes, wethers and lambs in the following proportion: Five rams, 100 ewes, 25 wethers, and 50 lambs. The small number of lambs is owing to the shepherds killing all that are not necessary to keep up their stock, which is, of course, limited by the right of pasture.

The number of traveling Merino sheep is about 5,000,000. The fleeces of the rams weigh eight and a half pounds; of the ewes five, which loses half in washing; but in this there is a great variety, according to the different species of Merinos. The produce is about 24 reals, or 16 shillings. Of this, the owner receives but two, the King six, and the remainder goes to the payment of expenses, of pasture, tythes, shepherds, dogs, etc.

Those who are familiar with the handling of flocks on the Pacific Coast will recognize the similarity of the present practices there to the Spanish way of handling sheep 200 years.

Lincoln Sheep.

EDITOR AMERICAN FARMER: The fairs are a thing of the past and at the Ohio State Fair, Lincolns came out with flying colors. Competing against the World's Fair winners of Cotswolds, they won five firsts and three seconds at the Michigan State Fair. We took seven firsts and six seconds against the Leicestershire Chicago winners. At Grand Rapids every first but one.

A WATCH GIVEN AWAY TO EVERYBODY.

A Premium Offer that Breaks the Record.

READ CAREFULLY OUR OFFER BELOW.

Every Word of the Statement is Absolutely True, Though Hard to Believe.

Think of It! A Stem-Wind and Stem-Set Watch guaranteed a Perfect Time-keeper that Will Not Cost a Cent.

We have secured for our friends one of the most remarkable watches ever made, which is a stem-winder and stem-setter having all the features of a fine watch. It is 36 mm. in diameter and three-quarters of an inch thick. The case is solid gilt or gold, and the dial is solid silver, with a gold bezel. The watch is in its original box, and is in perfect condition. It is a very fine watch which will last for years. It is guaranteed by the manufacturer, and if it should ever fail, it will be repaired at no cost. The watch is guaranteed to be a good watch and will last for years.

HOW TO GET IT.

We do not sell this watch without the paper, and no one can secure one of these splendid time-pieces by itself.

We will send this watch for a period of 30 days by mail to any person who sends us his name and address.

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Send us your name and address for nothing for the year, and we will send you the paper for one year, postage paid.

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POLTRY PIGEONS & PET-STOCK



NEBRASKA POLTRY.

Bright Ideas from a Very Practical Woman.

By MRS. HARRY TAPPAN, NEBRASKA.

Circumstances prevented me from taking part in your recent prize competition. The papers were excellent, and I was pleased to think that all prizes were taken by women. Poultry raising is essentially woman's work. Poultry fanciers of the male gender are plentiful enough, to be sure, but on the farm, where poultry raising is always practiced to some extent, the labor and pleasure of caring for the chickens devolves upon the women. For my part I delight in the work and appreciate the pleasure and reward it brings. I would not let the "good man" see to the hens even if he wished; though, we go "smoks" on the proceeds; he furnishes the feed, you know.

Just now I am culling out my surplus stock. All early moulting hens and early-hatched pullets will be retained for Winter layers. The others, with the males not desired for breeding purposes, will be disposed of. There is no profit in keeping hens that moult late. The later a hen discards her coat the longer it will take her to put it on again. Hens that moult early pass quickly and easily through this trying ordeal and after a short recuperation of spent strength and vigor begin laying and keep right on; under favorable conditions they will lay all through the cold Winter months. My May pullets have been laying for some time now.

I started out to tell you how I manage to make poultry pay, so I will have to begin at the beginning—i.e., with the newly-hatched chicks, for once the latter become stunted and their vitality impaired, much is lost both as to size and profitableness. For the first day or two the little chicks are fed upon hard-boiled egg mixed with oatmeal or cornmeal into a crumbly mass. As soon as they eat well they are given, instead of egg, coarsely-ground oats, corn and millet; in fact, anything that I happen to have, including chesse made from sour milk, which is fed sparingly until the little fellows have become accustomed to it, else bowel trouble may result. As they grow older I alternate dry food and whole grain with meal moistened with milk or water. Cracked wheat, corn and oats, and fresh water or milk are kept in large lath coops where the chicks have free access to it at all times. It is astonishing how they grow.

I get ahead of lice on chicks in this

and they have water and plenty of milk. They have sand and fine gravel, but no fancy fixin's of any sort. My hens are faithful Winter layers. I provide no dust baths for the reason that here in Nebraska there is plenty of dry dirt in sunny sheltered situations, where the hens daily congregate for a little quiet enjoyment.

Growing rye in an adjacent field furnishes them enough green food. A hen will not grow too fat even when liberally fed, if given plenty of scratching to do. My hens are healthy. Cholera is almost unknown. Roup is prevented by rendering the poultry house tight and dry.

I had but two roosters last season and over 100 hens, and eggs never hatched better for me. The chicks were strong and vigorous and I did not lose one from disease. My chickens are hatched during April and May. I never bother with late chickens, except those wanted for the table. I always watch for the destructive red mite, and upon his first approach he is met with a pail of hot whitewash and a brush in the hands of a strong man. The whitewash is made further disagreeable to the health of Mr. Mite by adding a liberal allowance of carbolic acid. It is seldom that a second application is required in a season. The poultry house is kept reasonably clean at all times.

Incidentally, I want to mention another remedy for the destruction of lice on fowls. Dip 'em. Make a weakened solution of kerosene emulsion and immerse them, all but eyes and ears. This possesses the virtue of penetrating to every feather, killing every louse and every nit. It is quickly accomplished, and if a warm day is chosen for the work, the hens will scarcely mind it and no evil results will follow.

More About Lice.

By GEORGE L. HAMILTON, PENNSYLVANIA.

The extermination and prevention of lice is one of the most important topics concerning poultry raising. Having found this out from experience, I will endeavor to describe, briefly, methods which I know, if followed, will prove eminently successful, and allay all trouble from that source.

To begin with prevention, we first

must begin in the construction of our poultry houses. The houses should be

constructed, if possible, entirely of yellow pine and sassafras woods, as lice will not

stay on these varieties, owing to the pungency of either. The siding, flooring, etc., should be constructed of yellow pine, while the studding, joists, sills, etc., may be of either. Roofing, tin gives the best satisfaction. Right here I would say, use the best quality obtainable and save the annoyance of re-roofing. Where tin cannot be obtained, use the best yellow pine shingles. I prefer tin, as in warm weather the houses cool quicker at night, and there is less danger from suffocation, and also because the lice will not adhere to it. The rafters may be

pensive failure? I think so. Once a week you should scatter about a small bucket of lime. Every day place plenty of ashes and dust for the fowls about the roosts. The manure should be removed every two weeks, and if lime has been placed or scattered over it, it will be dry and easier handled.

Extermination is the most troublesome. Now here are a few satisfactory remedies: Thoroughly clean both fowls and houses. The houses should be thoroughly renovated; tear down and burn all roosts, nests, etc., by first anointing with kerosene and then applying the match; remove all filth, manure, etc., to a safe distance and leave exposed to the weather; pour kerosene or carbolic acid in all



WHITE MINORCA COCK.

cracks and fissures, or anywhere lice are apt to congregate; scatter plenty of fresh lime and ashes over the floor of the building. It should be closed tight and thoroughly fumigated by burning sulphur, first, of course, excluding the fowls. Substitute new nests, roosts, etc., and your house will be free from the pest.

How to clean the fowls: They will clean themselves if given time, but in the meanwhile you may get lice back in your house. A simple and effective remedy is this: Make a strong solution of asafoetida dissolved in luke-warm water and bathe or dip your fowls. Do not be afraid, for water will not hurt them if it is tepid and the weather is warm. For head lice, grease with camphor and lard, and you will have clean fowls. Adult fowls are not much affected with head lice, but all young fowls are, more or less. The bath in asafoetida water will quickly exterminate all body lice.

I am not perfect nor too old to learn, but will say our poultry have no lice.

Value of Green Cut Bone for Poultry.

It has been proved that green cut bone will often increase the egg yield from 50 to 100 per cent.; it also will stimulate the fowls during the moulting period to such an extent that the flocks do not suffer as formerly in this trying time. The juices and gristle in the fresh bone contain, in a digestible form, large quantities of nitrogen, which is absolutely demanded in forming the new quills and new feathers; therefore, in moulting, this nitrogen, when fresh bones are fed, is drawn from the food given to the fowl instead of being drawn from the reserve force of the fowl, which takes her strength, stops her from laying, and makes her prone to disease.

If you raise with chicken hens you must have a good coop ready for them. When you take the hen and turks off the nest dust good with insect powder. We would feed dutch cheese or bread and milk pressed rather dry; this should be the main food for a week or two. Each pleasant day the hen should be allowed to run with the young turks in the front yard among the grass. Insects are the natural food for the young, and if allowed their liberty, when the grass is dry, they will do well; but they should be looked after, as the chickens are apt to bother them for a while, until they get used to them; they must be kept shut up early and late, as they are seen to be hunting their nests. The eggs can be removed, but hen eggs must be placed in the nest in place of the ones removed; then when they are ready to set, if in a good place, the turkey eggs can be given them, or the eggs can be placed under chicken hens, and the turkey hen shut up for a few days, when she will forget her desire to sit and will soon begin laying. The second laying of eggs should be given to the turkey hen to hatch and rear the young.

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We are sure that the practical and economical farmer or poultryman of today, who looks well at cost, will utilize a material for poultry which brings in the end the greatest profit. We have used the granulated bone and paid a good price for it, but by using a bone cutter we got meat, gristle, oil, fat, fine bone and granulated bone all in one operation. The sharp, hard pieces of bone act as grit. The fine bone helps to make the shell, and the other half or two-thirds of ordinary market bones is rich, nourishing food, forming the feathers and flesh of the fowl, and the interior of the egg in abundance. We advise all our readers to look carefully into these new methods of feeding, as they come up, and understand them for themselves. —Poultry Keeper.

Good Advice.

EDITOR POULTRY DEPARTMENT: Poultry is becoming a business of pleasure and profit for many persons of small means. A few years ago farmers would keep hens as a part of the pursuits of farming, and an open shed usually sheltered the feathered flock from the cold storms of Winter. Small returns were the results, but now poultry is coming to the front, and farmers are taking more interest in the business, by providing better quarters, better care, better feed, and as a result better hens, better profits, better farmers and better farming. Away with old-style poultry keeping, with a flock of hens so mixed that every hen wore a different plumage. Assorted colors will do for a flower garden, but not for poultry. A yard of White Leghorns is indeed a handsome sight. A nest full of large, white eggs adds beauty to the situation, but they, like the hen of old, hide their nest, if not confined to the house and yard, and these nests must be found before the eggs are spoiled; nothing injures a poultryman's reputation in market so much as spoiled eggs. I have seen men marked in market as sellers of bad eggs. Customers can't be cheated more than once, and when one is cheated he spreads the news and soon people learn to mark the retailer of bad articles and shun him.

The Leghorns are first in rank as layers, but I would say the Plymouth Rocks take the lead for a market breed. Emerson says that the measure of civilization is not to be found in raising fat cattle, fat horses, big vegetables, but in the quality of the men and women it develops.

On pleasant days Mrs. Biddy is expected to hustle for her own dinner. In inclement weather they are kept housed and dry grain, preferably cracked, is scattered in the straw. Whenever the house is visited it is well to scatter a little grain about. This affords the hens abundant exercise in hunting for it among the straw. At night they get all the corn from the oven, that they can eat,

either pine or sassafras, but sassafras will give best results. The roosts should be sassafras poles two or three inches in diameter, with the bark left on; they should be always constructed on the sides of the building; they may be suspended from the joists above, as the roosting apartment should never be ceiled. All steps and walking-planks accessory to the roosts should be of sassafras. Nests should be constructed of yellow pine, and roomy enough to be comfortable to the hen, but not too large. The nest properly should be of oat straw, as hen will not breed so readily in it, and they should be cleaned and new straw added every eight or ten weeks.

Now, having constructed our house, we must further proceed to insure prevention in case it should be necessary. The interior should be whitewashed at least twice a year (in the Spring and Autumn), as it will not only serve as a preventive but promote the health of the fowls; the exterior may be painted or whitewashed at your pleasure. If a chimney is built in connection (but I prefer just a pipe flue) the mortar cracks, etc., should be thoroughly drenched with a solution of carbolic acid, preferable to kerosene, lessening the danger of fire.

If a house is constructed as I have recommended, there is really very little preventive needed. The windows may be of glass (always putted) in yellow pine sash. Such a house is expensive, you may say. Friends, is not an expensive success to be preferred to an inex-

A good hen should leave its owner a dollar after paying all expenses. A bushel of grain ought to keep a hen a year, and a hen should lay about 200 eggs a year; these should be sold at an average of 15 cents per dozen, amounting to \$2.50; 50 cents of this can be used for shells, meat, bones and other articles, leaving \$1 for labor. If fowls are shut up, green food should be provided by having the yard divided into three or four compartments, having green forage growing in one while the hens are pasturing on the other.

Fresh Market Bones.

As food for poultry nothing is now prized more highly among progressive poultrymen than perfectly fresh market bones, cut up each day, in addition to the usual food ration. This elegant food supplies nearly, if not every, element of the complete egg, as well as the formation of bone, muscle and feathers of growing chicken. Fresh bones from

THE APIARY.

Humming.

Go into Winter quarters with as many young bees as possible.

To know what to do and to do it in time, after the hive is selected, is to succeed in beekeeping.

It is said that the bees of Brazil hang their combs outside on branches of trees, at the very summit, and at the ends of slender twigs, to be out of the way of monkeys, which are very fond of honey.

It has been positively settled that the queen can transmit bee-paralysis and also carry from one locality, where it may do no harm, to another, where the mischief may be great. A breeder who sells queens, should, therefore, never allow a case to remain in his yard a day after discovery.

H. Petersen, an Australian beekeeper, has the largest yield on record. He started in Spring with 63 colonies; increased to 120, and extracted a little over 48,000 pounds of honey—an average of 750 pounds per colony, Spring count. Michigan has a beekeeper living near Evarts, who keeps nearly 350 colonies in seven different yards, and who raised over 20,000 pounds of honey this season, and who has not failed of getting a good crop for 18 years past.

The old-time fly-hole in the front of the hive is being advocated in place of the entrance at the bottom and alighting board which has been so long used. Three three-fourth inch augur holes are recommended as a good plan, and it is said by those who have tried them that the bees use these holes from choice. One advantage is that such an entrance is easily defended from robbers, and others are, it is out of the reach of toads and mice. Grass will not grow up over it, and there is no danger of clogging up with dead bees in out-door wintering.

In advising beginners, Chas. Dandt warns them against the use of small hives, which require more work, more feeding of bees for Winter and Spring, and do not give as good results as larger ones. To his mind a 10 frame Langstroth hive is not even large enough. He prefers hives containing 10 or 11 Quinby frames. These frames are larger and longer than the Langstroth, and although white clover is his only resource his crop can compete for quantity with those of beekeepers using small hives located in more prosperous districts.

STIMULATIVE FEEDING.

Advantages Proved by Results.

At the recent meeting of the North American B. K. A. Sec. Frank Bent said: I have contended for very many years that stimulative feeding is at the bottom of all success in beekeeping. But it is only with myself that I have contended—have tried to consider the matter from all standpoints and subject it to careful experiment, because there have been so many against me, some of them especially being those with whom a controversy once entered upon would be never ending. I believe that to obtain the best results it is necessary to stimulate whenever bees are not gathering honey, and yet can fly out for exercise. I would have a prolific race of bees, and I would have the choicest and most prolific queen of that race. A prolific queen is the cornerstone of success. Whenever bees are not gathering honey, and the winds are raw and cold, I would still stimulate them, but this can be carried too far. Whenever in the middle of the season an important yield of honey is anticipated it is easy by stimulative feeding to get the hives crowded with bees ready for that harvest. After that may or, according to circumstances, it may not be profitable to stimulate them. If no honey comes in for a time, so that brood-rearing ceases, and if it is still possible to rear workers in time for a Fall flow, by all means resort to stimulative feeding if the time can be found to attend to it. Or if the colonies have become reduced too much during the last honey flow, the remaining bees being mainly old ones, it will pay to stimulate.

In September we had a moderate yield (chiefly from wild asters), and just those colonies which had been stimulated occasionally during the long Summer drought and honey dearth, stored more than the others—many of them four or five times as much. They were so much stronger in bees they could send a force into the fields. I am sure the immediate return in honey from my bees would have been greater had I not increased my colonies beyond such a number as I could have stimulated regularly during the Summer. But I have shown my faith in the future profitability of bee-keeping by increasing my apiary until it numbers 140 colonies. In this connection I wish to make one other statement. I have kept bees from my childhood, and for more than 20 years have engaged in this business exclusively; my experience has, moreover, been in several different States of the Union, and in a number of foreign countries under conditions of climate and pasturage which have differed very widely from each other, having been located in tropical, again in sub-tropical, northern and Alpine regions, yet when my colonies have been in excellent condition—such as they can always be kept up to by feeding at the proper time—I never yet experienced a season when they did not gather enough to last all the season.

Green Cut Bone.

BY SIMON DURST.

May be sung to the tune of Sweet Marie.

When you wed and settle down,
Sweet Marie,
In the suburbs of the town,
Sweet Marie,
Ducks and geese you will own
And will want the best "feel" known,
Which is always Green Cut Bone,
Sweet Marie.

Green Cut Bone is the thing!
Summer, Autumn, winter, spring!
Is the secret of success,
Sweet Marie.
It makes the poultry lay
More, and more, as they say,
Try it on your wedding day,
Sweet Marie.

An Open Question.

There is a controversy going on in the bee papers as to whether bees will do well in two stories as with the same amount of room in one story. Some who have tried the tiering up of the eight frame hive prefer it to the 10 frame. One reason is that bees in 10 frame hives

are not so provident in early breeding, on account of the extra honey the hive will contain. Another reason given is that, in any size of hive containing L. frames, after bees have six or seven frames well filled with brood, they would much rather occupy two frames directly over the seven than one at each side of the seven. They also prefer to economize heat for breeding than to warm up space at the side.

A writer in *Gleanings* gives his experience, which is entirely contrary to the foregoing: "I have been using the eight and ten frame hives side by side, half of each. I have kept record for three years, and my 10 frame hives are ahead. Three of my best 10 frame colonies gave me 100 pounds each this year; three best eight frame, only 60 pounds. The 10 frame hives have 10 frames full below, and the others only eight. I use half-depth frames on all my hives for extracted honey. I put them on early in the Spring, then when well started I raise them up and put sections under. This is the only method by which I can secure any honey. This has been a great year for swarming here, yet I have had only six swarms from 30 colonies by this plan." We should be glad to hear evidence from our beekeeper readers on the subject.

How Many'll Hatch?

Is the question that confronts the poultryman who starts his incubator. With the Improved Victor Incubator and Brooder the answer is always the same—so many as there are fertile eggs. In an interesting and hand-some catalogue recently issued by the manufacturer of these specialties, Geo. Ertel Co., Quincy, Ill., the following claims are made, which seem to be borne out by hundreds of testimonial:

The Improved Victor is the only absolutely self-regulating incubator in the market—it is the strongest, most neatly constructed, most easily operated and most durable.

It is the only incubator regulating itself to both extremes of temperature, from way below freezing point up to 90° or more above.

The Improved Victor Hot Water Brooder has been especially designed for raising chicks they are hatched in. So warranted by the manufacturer.

The Improved Victor Incubator and Brooder is the cheapest first-class hatching and raising outfit ever made or sold, and can be bought with perfect safety, being patented and manufactured by an old established and reliable firm. Send an once for catalogue, which can be had free, if mention is made of this paper.

Pea and Bean Weevils.

Many bean bushes of garden peas and beans, cow peas and soy beans, will be destroyed by weevils in this State during the coming Winter, unless proper treatment be used. These weevils are two species of the genus Bruchus. B. pisi, the pea weevil, is the larger and is blackish with white spots. It attacks only garden peas, never garden beans or the cow pea, which is a true

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We have arranged to club with the *Weekly Witness* of New York. Its price is \$1 a year when taken alone. The *Witness* is a 16 page weekly paper and among its contributors Rev. Josiah Strong, D. D.; Rev. John Hall, D. D., L. L. D.; Rev. Robert S. MacArthur, D. D.; Rev. Theo. L. Cuyler, D. D.; Rev. M. C. Lockwood, D. D., of Cincinnati; current weekly sermons by Dr. Talmaire; Sunday school lesson by Dr. George F. Pentecost, etc. It is one of the strongest and most popular family newspapers published.The *Witness* and THE AMERICAN FARMER will be sent to any address for one year postpaid for the small sum of \$1.20 for both publications.

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At Home and Abroad, the leading musical monthly publication of New York City, will be sent one year, with THE AMERICAN FARMER, for \$1.10, both papers postpaid. Every number of At Home and Abroad contains a collection of vocal and instrumental music that could not be bought separately in sheet form in the stores for less than 70 cents. Remember, that by our arrangement 12 numbers of the paper and THE AMERICAN FARMER for a year for only \$1.10.

These offers are open to all subscribers in connection with THE AMERICAN FARMER. Neither the *Weekly Witness*, Sabbath Reading, nor At Home and Abroad can be furnished by us without a subscription to THE AMERICAN FARMER for one year accompanying the order.

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Almost a New York Daily.

That Democratic wonder, the New York *Weekly World*, has just changed its weekly into a twice-a-week paper, and you can now get the twice-a-week paper for the same old price—\$1 a year.

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We have made arrangements by which we can furnish THE AMERICAN FARMER and the twice-a-week New York *World* for only \$1.15 a year. Here is the opportunity to get your own local paper and the New York *World* twice every week at extraordinarily low rates.

TO ALL TO WHOM THIS PAPER SHALL COME.

Greeting: This paper is sent you that you may have an opportunity to see it and examine it, with a view to subscribing. We ask you to compare its contents, objects, and price with those of other papers, and see if you do not come to the conclusion that you ought to have it; that you cannot afford to do without it. We can assure you that if you send in your name for one year that you will find it one of the most profitable investments that you can make. We hope to make and keep it so interesting that you will think that every number more than repays you for the subscription price for a year. Please call your neighbor's attention to the paper.



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SIGHTS AND SCENES OF THE WORLD.

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PRACTICE INSTEAD OF THEORY.

The way to make any business profitable is not by the exploitation of windy theories or business in general, but by careful, solicitous attention to the actual income and outgo. That which comes in must be made of more value than that which goes out. The way to make a farm pay is not by the outlining and pursuit of fanciful doctrines as to agriculture, but by constant and studious effort to make the cost of that which is sold be less than the price obtained for it.

It is the same thing with the management of the business of the great community which we call the United States. We cannot make ourselves rich by any visionary monetary schemes. No amount of talk in Congress will bring us wealth. But we can secure prosperity by following the course the French have for centuries, and the Germans have ever since they were brought together as a Nation and have had control of their own affairs. The French have always recognized that the prosperity of the country rested upon the farmers, and that unless they were making money no one else could. England, which sold manufactured goods to the rest of the world, felt that she could partially ignore the farmers, but the French never thought this. While England's competitor in many manufactures, she is pre-eminently a Nation of small farmers, and nowhere in Europe are the farmers so well off as in France. She has nothing like the natural advantages of England, yet her people are nearly as wealthy; wealth is much more evenly distributed, and nowhere is there the hideous poverty which disgraces England. The reason is that the French Government, no matter whether royal, imperial or republican, has always been extremely solicitous of the welfare of the small farmers, and neglected nothing that could promise to advance their interests. We hear very little of windy discussions of abstract economic theories in France. But everybody knows and feels that when an agricultural product is bought abroad that could be raised in France, French farmers suffer from loss of a market, and the thing ought to be stopped. When the first Napoleon found out that the most of the money sent out of the Empire was for sugar, he said very decidedly that the thing had to cease, and set his scientific men to work to find out how to raise sugar on French soil; and after years of discouragement, the magnificent success of the sugar beet was the result. So it has been with hundreds of other things. France allows no money to be paid out of the country for products that can be grown on her own acres. The country is governed in the interest of the people who live in it, and they are not fooled by specious plans for the benefit of outsiders. France is for the French, and for nobody else.

That is the way we want this country governed. We find that \$300,000,000 in gold is sent out of the United States every year for farm products which we could raise at home. No amount of theorizing, no prating of economic dogmas will ever convince us that this can be right. We believe it to be a folly that amounts to a crime. It is a sapping of the very life-blood of our prosperity. We say that any Congress which does not make an effort to stop this is guilty of the gravest dereliction of duty. Let us turn this river of gold, which fertilizes foreign fields, backward to the enrichment of our own. Let us stop uttering and listening to cloudy theories, and consider absolute, every-day facts. The plainest of these is that it is a wrong to every man in the country, and especially to the farming class, to send a dollar out of the country for a farm product that can be raised at home. This is such common sense that it seems absurd to have to assert it. No matter how much money there may be in the country, it can never stand such an enormous drain as that of \$300,000,000 a year for farm products which its own people should raise. Money will always be scarce as long as this extravagance is allowed to continue.

A DEPRECIATED currency comes in to help aggravate the question of cheap wheat. Argentine has a paper currency, of which it takes \$2.80 to buy a dollar in gold. The English dealers use this money to buy wheat with, and of course the farmer gets the short end of the lever. When he sells his wheat for 70 cents a bushel in paper, he really only gets 25 cents in gold for it, and as the buyer can lay the grain down in Liverpool for another 25 cents, the price of wheat all over the world goes down to the 50 cent price.

THE high and constantly-rising price of camphor has turned the attention of many Californians to the practicability of raising that nerve soother and basis for celluloid. Camphor that once sold for 10 cents a pound now brings \$1. We import 2,000,000 pounds a year, valued at \$425,000. The camphor tree grows very finely in California, where it is used as an ornamental tree. The most of our camphor comes from the Island of Formosa, which lies in the same latitude as the southern part of the United States.

If you will raise wheat try to produce double the amount on the same area. This is the only way to make a profit out of the business. It costs nearly as much to raise 15 bushels to the acre as

MINNESOTA WANTS IMMIGRANTS.

For several years after the panic of 1873 Minnesota increased very rapidly in her farming population and secured a high class of citizens from the East. This was largely promoted by a very efficient Immigration Bureau established by the State, and which made the public well informed of the advantages of Minnesota's soil and climate. A few years ago, when the farmers began to feel that wheat-growing and some other branches were being overdone, the Immigration Bureau was abolished. Now it is proposed to re-establish it. It has been demonstrated that a great quantity of other things than wheat can be successfully raised on Minnesota soil. The total value of the farm products of the State for 1892 was over \$80,000,000. Of this, the value of the wheat was but \$23,000,000, or a little over one-fourth. Oats brought \$13,000,000; corn, \$9,334,000; barley, \$5,000,000; potatoes, \$2,710,000; flax-seed, \$3,000,000; timothy seed, \$734,000; apples, \$79,385; buckwheat, \$50,000; hay, \$16,000,000; butter, \$4,206,000; cheese, \$85,568; wool, \$152,564, etc. Besides, there were large quantities of pork, cattle, hides, grapes, tobacco, honey, maple sugar and sirup, cane sirup, poultry, eggs, strawberries, and vegetables of all kinds, produced and marketed. Only about one-third of the state is yet under cultivation, and there are unoccupied land enough to furnish farms for 1,000,000 people. The Government has several million acres in the northern portion of the State. The State has 2,000,000 acres yet of the lands given her for schools and internal improvements, and the Northern Pacific Railroad has 1,500,000 acres, which it sells at from \$3 to \$5 an acre for timber land, and at from \$4 to \$10 for prairie land. All these may be obtained on very easy terms.

A BLESSING IN DISGUISE.

The people of the South are finding that cheap cotton is not an unmixed evil. It has turned their attention to two important things. One is the wisdom of raising their own supplies, and the other is the advantage of small farms and thorough cultivation. Men have found that if they raised their own corn, meat, hay, wheat, oats, and sorghum, they came out ahead, though they had to sell their cotton for five cents. They have also found that with a small farm, and thorough tillage, they raised more cotton than when they went in debt for fertilizers to scatter over big fields. The average production of cotton in the South was only .347 of a bale per acre, yet many men, with no better land than others, succeeded in raising from one to two bales per acre, by careful cultivation. Quite a number of reports have reached us of raising 30 bales on 20 acres, and every one of these came from men who had "small fields well tilled."

We do not remember seeing more sense packed into a single paragraph than in the following from the *Hampton (S. C.) Guardian*:

As long as a pound of cotton would buy a pound of bacon there was a slight excuse for planting cotton so extensively; but now, when it takes two pounds of cotton to buy one of bacon, it does seem that more attention ought to be bestowed on corn and hog producing.

A DEPRECIATED currency comes in to help aggravate the question of cheap wheat. Argentine has a paper currency, of which it takes \$2.80 to buy a dollar in gold. The English dealers use this money to buy wheat with, and of course the farmer gets the short end of the lever.

When he sells his wheat for 70 cents a bushel in paper, he really only gets 25 cents in gold for it, and as the buyer can lay the grain down in Liverpool for another 25 cents, the price of wheat all over the world goes down to the 50 cent price.

THE high and constantly-rising price of camphor has turned the attention of many Californians to the practicability of raising that nerve soother and basis for celluloid. Camphor that once sold for 10 cents a pound now brings \$1. We import 2,000,000 pounds a year, valued at \$425,000. The camphor tree grows very finely in California, where it is used as an ornamental tree. The most of our camphor comes from the Island of Formosa, which lies in the same latitude as the southern part of the United States.

If you will raise wheat try to produce double the amount on the same area. This is the only way to make a profit out of the business. It costs nearly as

50, and you are working for nothing or less than nothing with the smaller crop.

NONE of the flatulent talkers on the money question seems to have grasped the fundamental idea that the best and surest way of making money more plentiful is to stop sending out \$300,000,000 in gold every year for products that we should raise at home.

It is very pleasant to read about increased exports of our farm products, but still more pleasant to read about success in producing at home an increased amount of the \$300,000,000 worth of agricultural products that we buy abroad every year. The first means apparent small gains for our farmers, with bigger ones for the railroads, steamships, and middlemen, while the second means larger gains for the farmers, the retention of our gold at home, and general benefit to the whole country.

CHRISTMAS CAROL.

BY BISHOP PHILLIPS BROOKS.

The Earth has grown old with its burden of care. But at Christmas it always is young; And the heart of the jewel burns lustreous and And its soul full of music bursts forth on the air, When the song of the angels is sung.

It is coming, Old Earth, it is coming to-night! On the snowflakes which cover thy soil; The voice of the Christ child falls gentle and white, And the voice of the Christ child tells out with delight, That mankind are the children of God.

PERSONAL.

The National Grange is called upon to mourn the loss of one of its most valued members, Sister H. H. Woodward, of Michigan, wife of Hon. J. J. Woodward, of the Executive Committee. She died Nov. 4.

Jas. Gray and George Wilson, the latter a Justice of the Peace, of Burlington, Ind., made a sad mistake last month. They had taken in more whisky than was good for them, and as they passed along the road, they saw an old farmer husking corn. It occurred to them that it would be lots of fun to give him a sound thrashing with their whips. They didn't know the man, but the idea originated through pure cussedness. They proceeded to carry out the brilliant idea. The old farmer proved to be George Dill, a prominent man in that region, and he gave the villains the worst thrashing known in the history of the country. Squire Gray's jaw was broken in three places and soon both lay unconscious at his feet. Dill then picked up the man, laid him on the back of the wagon, and gave the horse a cut and started them home. Wilson will recover, but the physicians say Squire Gray can live but a short time. He was injured internally.

GET UP CLUBS.

Now Is the Time to Get Your Papers Cheap.

EXTRAORDINARY INDUCEMENTS.

THE AMERICAN FARMER should be a regular visitor to every farm-house in the country. It is the oldest agricultural paper in America, it is one of the very best, the most common-sense and practical, it is exceedingly cheap, and it is a fearless, outspoken advocate of just treatment of the farmers at the hands of politicians and the Government.

We want every farmer in the country to take it, and we have devised a scheme which will give it to every one at a nominal price. The subscription price is 50 cents a year, and it is very cheap at that price.

But if two farmers will send their subscriptions together, we will give the two for one year for 85 cents, or 42½ cents each.

If three will send together, the price will be \$1.25, or 41½ cents.

If four join together the price will be \$1.50, or 37½ cents each.

If five join together it will be \$1.75, or 35 cents apiece.

If a club of 10 is formed it will be \$2.50, or 25 cents apiece.

This makes a price so low as to defy competition.

There should be no trouble whatever in raising a club of 10 at every Post office in the United States.

Let every farmer who wants a first-class agricultural paper for the ensuing year at an almost nominal price, get nine of his neighbors to join him in a club, and send us \$2.50 for 10 yearly subscriptions to THE AMERICAN FARMER.

There will be no deviation from these rates.

Send in your clubs at once, so as not to miss a number.

TWO PAPERS AT LESS THAN THE PRICE OF ONE.

We have made arrangements by

THE GARDEN.

Pluckings.

Most garden vegetables are gross feeders, for whom the soil can hardly be made too rich.

Florida truckers whose crops were destroyed by the storms are turning their attention to planting strawberries.

Lettuce plants in the greenhouse should now be making good growth. Prevent the appearance of green fly by the free use of tobacco dust while the plants are yet small.

It is said that if cabbages are put close together, with the roots deep in the ground, and a furrow of earth turned over them, they will keep better than when the heads are turned down.

Land that is unproductive is not necessarily exhausted. The elements of fertility may lie in the soil, but in an unproductive form. Leguminous plants will bring it nitrogen from the air, and a crop of manure may supply some simple element to make a proper balance in its constituency.

All garden land should now be well manured and plowed, but not harrowed, as it is better to leave the surface rough for the frost to act upon. The soil cannot be made too rich or too well pulverized, and ground now laid out for growing next season should be put in the best condition possible.

By mulching strawberries heavily with leaves, keeping the covering on late in Spring, late fruit is obtained, which could not be had in any other way. It is not in the covering so heavy that the plant is not under it, but wait till the ground freezes before placing the leaves on.

Gathering and storing the root crops can no longer be delayed. Beets, carrots, manna, etc., can stand a little frost when yet in the ground, but no heavy freezing, and not much frost when pulled and ready for storage. Whenever stored, they should be kept from melting as well as from freezing.

The parsnip is a hardy root, and will not suffer in any way by leaving the crop in the ground until Spring. Market gardeners indeed, dig them out for sale during the Winter, as they are then taken up in the best condition without drying and shrinking. If they are taken up, they should be kept in a cool, rather damp, cool cellar.

Those who have late limas in the garden, can prolong their season of usefulness by picking them in the green state and spreading them thinly on the root and letting them dry in the pods. When perfectly dry, shell and put away for Winter's use as wanted. Soak over night in cold water before using, and there will be but little loss of the original flavor.

There is little difference in varieties of asparagus. Rich soil and good culture will make good shoots from any kind. The Palmetto is now the most popular sort. One can get the feed from any good seedman. Sown down in the Spring and well cared for in good soil will make good roots for setting the next Fall, and the second year after setting one may get a fine crop.

A root cellar for storing should be nearly all below the surface. Side walls will be necessary, and upon these should be sprung an arch as flat as is safe. In the center of the roof there should be a piece of slate six inches in diameter to allow the heat that will naturally come up from the bottom to pass off. It should have double doors, the outer ones on the stand, like the ordinary outside cellar door. Put the vegetables on the floor, where should be the natural earth, and over with sand just as it is taken from the bank. Put a cap over the venting pipe to keep out the light, but not so tight that the warm air from below cannot escape freely.

Cauliflowers, if put in when the heads begin to form, and if the roots are covered with sand, will develop their heads perfectly, so that these luxuries may be enjoyed almost the whole Winter. Cauliflowers have heads but half grown will perfect their growth before Spring and be far more delicate and tender than if put away fully grown.

Keeping Sweet Potatoes Through the Winter.

The following method I have found to keep sweet potatoes in perfect order until June. Procure a good supply of pine straw from the woods in a dry time and keep it under cover ready for use.

Dig the potatoes as soon as frost cuts the vines. If not convenient to dig at once, cut the frosty vines off at once, or they will harbor fungus growth that will damage the potatoes.

Dig on a warm, sunny day—lay the potatoes along the row as dry, and do not allow them to be buried by throwing into piles. Handle

them to lie in the sun during the day, and in the evening haul to a convenient place. Place a good layer, a foot thick, of pine or other straw on the ground, and on this pile the potatoes in steep heaps, not over 25 bushels in a pile.

Cover the piles with earth six or eight inches thick and beat smooth. The important points are the sweating under the previous cover of the pine straw before covering with earth, very careful handling, and keeps out more cold than wet earth.

If family use, put in smaller piles and keep up an entire heap at once for use, using—W. F. MASSEY, Horticulturist,

North Carolina Experiment Station.

More About Hard Times.

EDITOR AMERICAN FARMER: In a former article I stated that perhaps I would in the future give other causes, as I think, of present distress. I had almost forgotten the promise, when my attention was called to it by reading an article in *THE AMERICAN FARMER* by G. E. Place, in which he labors to show that I am (to make the best of it) mistaken. Perhaps, to an extent, we are both right, the difference arising from a view of his surroundings away up in Maine, in a nook between New England and Canada; mine was taken from the west, on the side of the Union during the war, have settled in the Old Dominion, and the intelligence displayed by them, as well as the native Virginian, in cultivating such crops as are best adapted to the soil of their respective neighborhoods or in the raising of stock. The establishment of dairies have resulted in a measure of prosperity almost unlooked for in Virginia.

By your permission I propose to give a brief account of some of the best of these farms, as I shall see them in a journey through the State.

Mr. Hodgen's residence is a willful waste of what has been received. The old adage "Wasteful waste brings woe want," (reference is had to those who are now suffering most; farmers who are not in debt are not much troubled.) How many wage-earners who, if they now had all the money they ever spent for whisky, beer, soda-pop, and tobacco, could now be in comfortable circumstances. I will give an instance: I learned recently from a reliable grocer that one of his customers used 25 cents worth of soda-pop each day. As I knew his store was not open on Sunday, I counted six days, making \$1.50 per week—\$78 a year. I then made the calculation to see the amount of provision that money would buy at present prices in this part of the country. I found it would purchase 500 pounds of flour, 30 bushels of corn, 200 pounds of bacon, 32 pounds of coffee, 50 pounds of sugar, 50 pounds of lard, \$10 worth of potatoes, mosaics and butter, leaving \$7 for spices, canned goods, etc. When I come to think it over, I do not believe that my wife and I consume more than that amount of the above named provisions in a year. Seventy-eight dollars a year spent for that which adds nothing to the strength, health or well being of any man or his family.

Now, I ask, how much can any kind of a tariff or free trade remedy such an evil? Another, and the one I consider greater in magnitude than all other causes combined, is the wickedness of the Nation in ignoring the laws of God; also, the blessings to which the patriots of the Revolution fought, suffered and died to obtain. In this the administration of the Government is allied to particularly. We claim that our forefathers obtained the great privilege, the inalienable right of our Nation, "Governed by and for the people, equal rights to all." Thus, all are included in the administration of the Government.

Admitting there is a great proportion of our citizens who are God-fearing men, who hate every evil way, yet they have suffered themselves to be led too much by party and party measures, regardless of consequences. Though there be many righteous in our Nation, of what avail is it if we are not presided over by that class of men, especially as regards the making and executing of righteous laws?

Mr. Hodgen's reputation among his neighbors of having done much to benefit the community in which he lives. He is a friend to education and has made liberal contributions whenever the cause stood in need of it.

Mr. Hodgen is a well-known broker, with offices in Washington, Philadelphia and other cities.

"OLD FAIRFAX"

Some of the Fine Farms around Lewinsville, Va.

EDITOR AMERICAN FARMER: Few persons outside the circle of friends of those immediately interested, have any idea of the wonderful advances made by the farmers of this State in agriculture during the past few years. Within that period a large number of Northern men, many of whom served with credit on the side of the Union during the war, have settled in the Old Dominion, and the intelligence displayed by them, as well as the native Virginian, in cultivating such crops as are best adapted to the soil of their respective neighborhoods or in the raising of stock.

Mr. Hodgen is a native of Lee, Mass., but has resided in Fairfax for about 10 years, and says he found that climate to be a happy medium between the rigors of the North and warmth of the South.

Mr. Hodgen's residence is a willful waste of what has been received.

When Mr. Hodgen bought the property it had become run down, but with judicious foresight he has through short rotation of corn, wheat and clover brought Highlawn to an elegant state of cultivation. He is also highly pleased with Canada peas and oats, sown together, for an early soil crop, while later crimson clover comes in nicely for soiling. He is also extremely favorable to cowpeas as a soilimprover crop, and a renovating crop for land.

Mr. Hodgen is a strong believer in good roads and good schools and thinks the lack of these greatly retard agricultural development in the State.

He also thinks that every farmer ought to take plenty of agricultural papers, and believes that the man who cannot get the value of his subscription out of any paper of the kind he may take has mistaken his calling.

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Mr. Hodgen's residence is a willful waste of what has been received.

When Mr. Hodgen purchased Mendenhall a few years ago it was in the "brush," but by intelligent direction and liberal expenditure of money he has brought it to a degree of perfection that has been attained by but few farms in the South.

The stock consists of 35 Jersey cattle, nearly all of which is registered; 300 cattle, sheep, and 14 horses; while so many men are employed by Mr. Hodgen to conduct the farm affairs and in building operations that his pay-roll frequently amounts to \$150 per week.

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ADVICE TO FARMERS.

Secretary of Agriculture Morton Makes His Annual Report.

WASHINGTON, D. C., Nov. 23.—The annual report of the Secretary of Agriculture is particularly interesting because of its reference to current troubles with foreign Governments over the importation of American products. He reviews the subject of foreign markets and gives figures of four agricultural experts, especially those of Great Britain. That country paid during the year 1893 for American breadstuffs, provisions, cotton, and tobacco, over \$324,000,000. Including about \$10,000,000 worth of mineral oils with agricultural exports, the United Kingdom paid 51.31 percent of all exports of breadstuffs, provisions, mineral oils, cotton, and tobacco.

Of dressed beef Great Britain took from us during the first six months of the year 1893, \$10,000,000 worth. Australia is our chief competitor for the trade. Mr. Morton deems it probable that the American farmer will find more advantage in the shipment of dressed beef than from the exportation of live cattle.

Referring to the frequent allegations on the part of European Governments that live animals from the United States are diseased, the Secretary expresses the opinion that these allegations are sometimes based on fear of infection, but are at other times made for economic reasons. He argues that if all American beef going abroad were shipped in carcasses bearing the Government certificate as to wholesomeness, it certainly could not be shut out on account of alleged disease.

HE HINTS AT RETALIATION.

He suggests that if certain European nations continue to insist on microscopical inspection of American pork and veterinary inspection of beef with Governmental certification to each, the Government of the United States might well suggest such inspection and certification by such foreign Governments of all imports thereto, whether edible or potable, intended for human consumption.

He reports a very large increase in the exports of beef and hog products over the year previous, with on the other hand, a marked decline in the exports of wheat.

The review of the foreign market leads him to certain conclusions as to the future of our export trade in agricultural products, as follows: Competition of Russia, Argentina, Australia, and other countries favored by conditions which enable them to grow wheat at a low cost, and especially by the proximity of their wheat-growing regions to water communication, warms American farmers to no longer depend upon wheat as a staple export crop.

On the other hand, a general rise in prices, to be had in the United Kingdom, for barley; and corn, owing to the great variety of uses to which it may be applied, promises to be in constant and increasing demand.

With reference to the Weather Bureau, the Secretary shows that nearly \$140,000 has been saved from the appropriation and covered back in the Treasury. He shows that, by heading the admonitions of the Bureau relative to the great tropical storm of September, 1893, vessels valued at over \$17,000,000 were saved. So in October, when over 1,200 vessels, valued at \$19,000,000, were kept in port, owing to the Bureau's warnings. Moreover, many human lives were preserved. The Secretary concludes that the investment is a paying one, and may prove come within the functions of the Government.

The work of the Bureau of Animal Industry during the year has been greatly improved, especially in the direction of the appropriation and the inspection of meat and interstate meat with the recommendation that the law providing for the same may be so amended as to compel the owners of the meat inspected to pay the cost of inspection. It widens the markets, thus enhancing the price of their property, they, as the direct beneficiaries, should agree to pay it for.

GUARDING AGAINST TUBERCULOSIS.

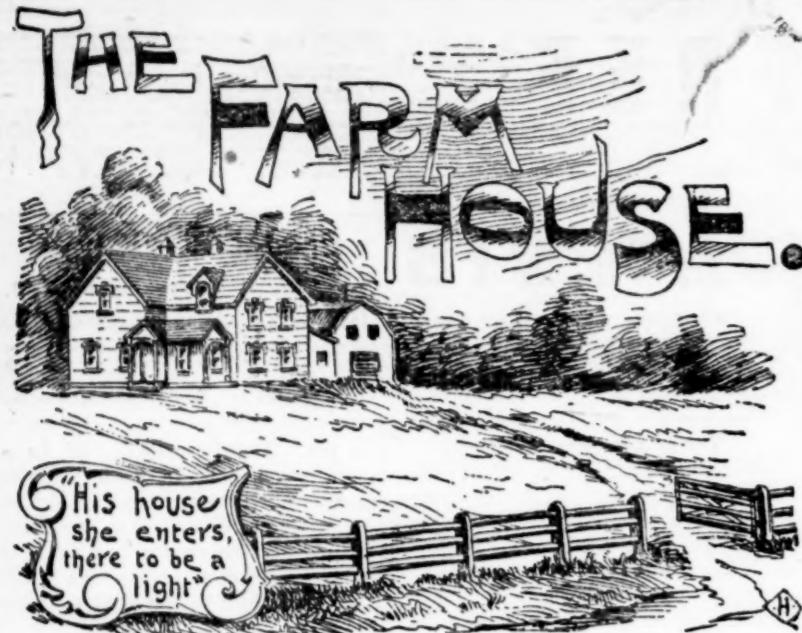
Special mention is made in the appropriation bill for the current year of tuberculosis and sheep scab as diseases. The Secretary of Agriculture is authorized to guard against these in view of the danger to human life from tuberculosis. The sterilization of milk has been thoroughly explained in a leaflet which is to be had in the Bureau of Animal Industry.

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The Dead Wife.

JAMES WHITCOMB RILEY.

Always I see her in a sautin gown
Of lilled raiment, white as her own brow
When first I kissed the taurours to the eyes
That smile forever now.

Those gentle eyes! They seem the same to me
As looking through the warm dew of mine
own.
I see them gazing downward patiently
Where, lost, and all alone

In the great emptiness of night, I how
And sob aloud for one returning touch
Of the dear hands that Heaven having now,
I need so much—so much!

ABOUT WOMEN.

MISS ELIZABETH POLHEMUS, a bright young California woman about 20 years of age, is qualifying herself as a pilot for ocean vessels entering the harbor of San Diego. In eight months she expects to pass the required examination.

**
A TRAVELLER TELLS THE FOLLOWING STORY OF A HOSPITABLE OLD LADY IN NOVA SCOTIA. She was one day urging upon her guests a choice of refreshments which they refused. "Now, do let me go and get you some pie," she said. "Just say the word; I've got three kinds of apple pie—open-face, crossbar, and kiverlid."

**

MISS ANNIE REYNOLDS, WHO is the first World's Secretary of the Young Women's Christian Association, is graduate of Wellesley. She is an accomplished linguist and much given to philanthropy, which makes her especially fitted for her position. She will make London her headquarters and travel much on the continent.

**

IT IS SAID THAT LADY CARLISLE IS TRAINING AN ENTIRE STAFF OF WOMEN TO TAKE CARE OF THE EXTENSIVE GROUNDS OF HER FINE YORK ESTATE. She claims that women, by right of their superior taste and judgment in everything pertaining to floriculture, should be, and are, better adapted to the lighter work of garden making than are men; and, with the tendency of the age, which is to give women the first chance at everything, she is trying her experiment on a wholesale scale.

**

MISS ISABEL DARLINGTON, A DAUGHTER OF EX-CONGRESSMAN SNUEDD DARLINGTON, OF WEST CHESTER, PA., WILL SOON GRACE THE CHESTER COUNTY BAR, HAVING PASSED THE PRELIMINARY EXAMINATION AND REGISTERED AS A LAW STUDENT IN THE OFFICE OF EX-JUDGE THOMAS S. BUTLER. It was said at the end of the ordeal that Miss Darlington had passed one of the best examinations on record in the County. At the end of the two years' reading she will be admitted to the bar practice.

**

ONE BRAVE AND PLUCKY girl is Miss Mary S. Soper, of Lodi, N. Y. Because of her father's infirmity she says she is the man of the farm on which they live, and she finds trousers much more convenient than skirts. That's why she wears them. She hoes, and sows, and chops wood, and her trousers she wears tucked in her high top-boots just as any horny-handed farmer does. Miss Soper wears skirts, however, when she ventures beyond the domain of her farm.

**

THERE IS NOTHING LIKE tact in introducing any reform movement and gaining one's end. Miss McCormick, a young California artist, is an illustration of this. She had long felt that in her own case, at least, there was need for dress reform, and by gradual changes accustomed the inhabitants of her village home, Pacific Grove, to short skirts without giving a violent shock to their prejudices. From the ordinary length she reduced the skirts half an inch daily, until they barely reached the knee. She wears leggings of russet leather, and her costumes, which are tailor-made, are becoming and even graceful. As to its usage, it has been said to be especially convenient for the young artist when she paints cattle, and causes fences to be no obstacle.

**

IN ALAMEDA COUNTY, CAL., there is a woman's pedestrian club called "Our Tramping Club." The chief condition of membership is the ability to walk 10 miles, but it is not unusual for the walks to be extended to twice that length. Twenty-four miles has thus far been the limit of each tour, and, clad in their suits of striped ticking, made with blouse waists, and skirts just long enough to reach the tops of their stout walking shoes, the girls have tramped on alternate Fridays to nearly every interesting spot accessible from Oakland. Sketching and natural history collections are incidental to the walks. Such an association would be an advantage to any community.

FASHION'S FANCIES.

Heavy black mohair braid is used for belts to simple cloth gown. For more dressy effects, velvet ribbon is worn. A fancy belt of this was made with two straps starting with rosets on each shoulder and caught to the front of the belt at the waist with two bows, and continuing with long ends.

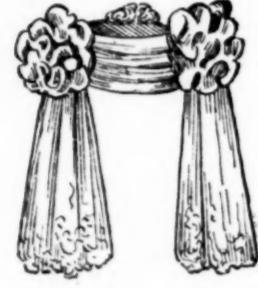
Sleeves keep to their voluminous size.

The big picturesque hats in the milliner's windows are, as a rule, covered with many ostrich plumes.

Coats are either very short or very long.

Collarettes.

Nothing has captured the feminine eyes so completely as the little fancy collars made to pin on over any gown one chooses to wear. These are made



of ribbon, lace, chiffon, net, silk, crepe or any like airy material, and of every possible color or shade. A roset under each ear is the regular order of things. These are now worn regardless of becomingness, but many of them are exceedingly becoming and dainty. A woman with very short neck and given to stoutness, should avoid making her neck look wider by adding the rosets.

Party gowns are cut to look as much like our grandmothers' as possible about the neck, shoulders and sleeves.

Every woman who can afford the luxury has invested in a great wide Anne of Austria collar, to be worn with street dresses. Most of these collars are cream color, but the white ones are more beautiful.

The pretty carved tortoise shell cups of long ago are now much in vogue. The taller and wider the better they are liked, and the woman is lucky who can take from her put-away things one of these, left over from a past era, for they are apt to be prettier than those of modern make.

Furs are much worn for trimming. Boas are growing shorter, and the little brown mink animal hold their own as collars. Muffs are larger than formerly.

For School.

The pretty Scotch plaids shown this season in the shops are especially suited to children. The cut shows a plaid of the mixed dark blue and green, made



up on the bias, with plain dark-blue cloth to match. In making up plaids, they should always be combined with the plain prevailing color, to break the mixed effect. A whale waist of plaid is rarely becoming.

EXCHANGE.

Mrs. Minnie R. Gale-Potter, Blackwater, Cooper Co., Mo., writes: "I have exchanged one year's numbers of 'Country' magazine for 'English Orphans' and 'Homeless' the other side, by Mrs. J. Holmes. Nine 'Widow Goldsmith's Daughter' books must be cloth bound and in good condition. Sheet music: 'The Orphan's Prayer,' for 'Gen. Smith's Grand March'; 'My Vision'; 'Distant Bells, polka,' for 'Chimes of Normandy'; 'Kilarney,' words and music for 'Grand March in Norma.' Exchanges must be in good order. Would also like a nice married lady correspondent in southern Kentucky and north Mississippi."

An open window in the sleeping room, even if the air is cold, will keep dull headaches away. No one who sleeps with closed windows or ventilates by simply opening doors to adjoining rooms need expect to have a bright, clear complexion.

WOMAN'S WISDOM.

Take Care of Your Gowns.

EDITOR FARMHOUSE: Great care must be taken of a dress when not in use, in order to keep it looking fresh and new. The following is a good way in which this may be done: Have a chest made about four feet long by 20 inches wide and 18 inches in depth. It may be lined by gluing to the inside any material desired for a lining. Over the bottom should be placed a layer of cotton batting or wadding sprinkled with sacking powder, and over that the lining drawn smoothly and tacked at the edges. The chest, when covered and cushioned, makes a pretty couch and serviceable for a bed-chest.

The dress or wrap should be folded carefully and laid in, leaving no clumps for wrinkles. Several articles may be laid in if light enough that their weight does not press articles beneath them.

Ribbons should be rolled before laying away.

Small perfume sachets may be placed between pieces of clothing, in order to give it the delicate odor desired, and is much nicer than the use of perfumes directly on the garments. Perfume sachets are made in a great variety of ways. Some are small bags filled with cotton batting, which has been well sprinkled with sacking powder; while others are made by placing a thin layer of hating and powder between two pieces of cloth of any desired shape. They may be bound with ribbon or burlap stitched with embroidery silk.

Silk, satin, velvet or ribbon is very pretty printed or embroidered in silk floss.

An ottoman on the same plan as the chest mentioned above, makes a convenient receptacle for shoes—DIANA.

THE BOYS.

How They Can Help, and Make Their Mother Happy.

EDITOR FARMHOUSE: I wish to ask: "Dear farmers' wives, what are you doing this Winter?"

"Oh, nothing much, only my housework, tending the babies and trying to keep my family's clothes patched up to keep them warm. I cannot get anything else done, cook, eat, wash dishes, sweep, make beds, churn, bake, wash, mop, iron, mend, patch."

"Well, I think that is enough to do. But does not the good man or big boy help you?"

"Oh! not much; they have chores to do; then they go to town."

"Well, don't let them go to town so much."

"How can I help it? I have so much to do it really helps me along to have them."

"Have them help you. Teach the boys to darn stockings and sew on the sewing machine. That will help you lots. Just say, 'Tom, won't you please sew up those sheets for me on the sewing machine?'"

"Why, I always sew my sheets overhand with my needle; they are so much nicer."

"Yes, they are a little nicer, but they are always coming unsewn where you take a fresh needleful of thread. Just let Tom take them and patch them up together in the middle and hold both ends, and in two or three minutes he will say, 'How about doing this for me, mother?'"

"Go and show him and in ten minutes he will ask, 'Where is your other sheet, mother?' and ask you why you never got him at the machine before. While Tom is making sheets, Fred will get a big needle and coarse thread, and you will hear, 'Oh, mother, where do you keep your buttons?' You will tell him, and the first thing you will know he will have all those buttons sewed on the coats, overcoats and jackets; and, 'Oh, mother, where are those overalls I took off the other day?' and soon the buttons will all be on. He has found a hole in the pocket, where he lost his knife through. He looks around on the floor, sees a little piece of cloth; it goes. They look up at the clock. 'Oh, my, half-past four, chow time, and me did not get to town to day.' Well, I feel better, anyway," says Tom, "than if we did go. And so do I," says Fred.

"Well, boys, you have helped me lots today and I did not worry about you, either, and I thank you very much."

Out they go to their chores, and you go to getting supper, and the first thing you know you are singing away. When they come in all smiling, and dirty boots, you don't scold them for making your nice, clean floor dirty. You say to yourself, "I wish I had some kind of a rug to put down for them to wipe their feet on, but I haven't time to make any. I must fix their shirts for Sunday."

After supper, you wash the dishes, Tom wipes them, and Fred mixes the pancakes or puts the dishes away; then they go to reading, and you go to fold up the rest of the muslin for your sheets. Where is it? You look around; there it is on a chair all nicely folded; you go to put it away, but, no, it is all torn. You say, "Tom, where is the sheet?" Tom says, "I don't know; I sewed it and hemmed in one day, and a big bed did it, too, when it would have taken you a week to overhand and baste the hem, and here you don't have a basting thread to pull out. You think about those boys when you go to bed, and are thankful one day passed and you did not have to worry about them getting in bad company. Not but that you could trust them, but there are so many evils lurking around town to lead young boys astray. You are thinking this was the happiest day you have seen for many a week.—MRS. W. T. JONES, Harrison, Neb.

NECESSITY OF CULTURE.

Another Strong Plea for Educating Girls.

EDITOR FARMHOUSE: In the issue of Oct. 19 we had a very good letter from one who introduced herself as the wife of a Missouri farmer. The theme upon which she chose to write is one which should have a corner in every good periodical.

Agreeing with the sister that it is a good idea to first get acquainted, I will introduce myself as a farmer's daughter, raised in Iowa, but for five years past have made my home in Kansas. I have been here teaching for 10 years, and as that work necessitated a good deal more traveling, I have seen into and been acquainted in a great many homes. One reason which, I feel assured, causes unhappy homes, and furnishes grounds for the great "ado" which has been over the topic "Is marriage a failure?" is the lack of proper education. Mark the word please. In my opinion, no 16-year-old girl is capable of taking full charge of a home. It takes that long to acquire a common-school education, if one has the very best advantages.

That, every mother and housekeeper should have. One who is wife, mother, housekeeper and cook all in one cannot do the best part for her children; yet, if she is studies, she may become master.

Her work must be simple as the sister suggested, give her hungry a plain, wholesome diet, and in teaching them to be orderly, and not do for them what they can and should do for themselves. A wise mother can keep a house in better order with half a dozen children than the ignorant girl could with none.

Another defect of poor housekeeping, aside from the health, is the extravagance. A dirty, disorderly housekeeper is always extravagant.

I pity the farmer's daughter in her "One Vacation" for not having an aunt to visit who lived in the middle path.

We find just such as "Aunt Mary" or "Aunt Martha" in almost every community. But where is our remedy? "Aunt Mary," I think, was not a really "Aunt Mary" person, because she is described as a real housekeeper, who is not good in her ways. "Aunt Martha" is a case where pride is lacking. This may grow on a person from the effects of associations. There is an idea prev-

alent among a few ordinary folk that if one acts poorly, or is cleanly, they are "prideful," and that is a trait to guard against. What a delusion!

Pride, in certain amount, at any rate, must be necessary to common decency. I mean a genuine pride. That which receives the name in most cases should be termed foolishness.

While I acknowledge to housekeepers they have a difficult work, I believe with a fair education and a few more years of experience by observation than most of them have, if mingled with pride, minus all laziness, any one could be a good housekeeper. If you are blessed with children, they make work, to be sure, but if they are kept healthy, they may be taught so that while very young they can do almost as much work as they make, outside their lessons.

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Ribbons should be rolled before laying away.

Small perfume sachets may be placed between pieces of clothing, in order to give it the delicate odor desired, and is much nicer than the use of perfumes directly on the garments. Perfume sachets are made in a great variety of ways. Some are small bags filled with cotton batting, which has been well sprinkled with sacking powder; while others are made by placing a thin layer of hating and powder between two pieces of cloth of any desired shape. They may be bound with ribbon or burlap stitched with embroidery silk.

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IT was a delicious morning, "such a one as dawns but once a season"—one of those days in early Summer when one is glad only to be alive and breathing the fragrant air.

I was sitting on the side porch hulling strawberries and watching the big daisies nodding in the wind over by the fence when the milkman's bell rang. Mary was washing, and my mother called to me from the kitchen to get the milk. I took the milk-pail and went slowly down the long path to the gate, more slowly, because I hated the milkman, a dirty youth, most flirtatiously inclined.

It was an agreeable surprise to me when I reached the gate to find a new face behind the milk-cans, a tired looking man with a well-cut profile and clean-shaven face—clean-shaven and clean.

I gave him the pail saying, "Two quarts, please," quite sweetly, considering he was a milkman, but still in a tone which would show him, if he were ever so much as to say, "I am unaccustomed to getting the milk and felt it rather beneath my dignity."

As he measured it out with the long dipper, there was a funny little smile around his mouth and in his eyes which rather exasperated me, for I considered myself in no way an object of amusement for stay milkmen.

I was very dignified, therefore, in my manner, and went back to the house with my head well in the air. When I found my small brother had decorated said head with a waving asparagus plume erect among my cherished curls, I wished I had tossed it less proudly, for I objected to being ridiculous even before a strange milkman.

That evening, when the bell rang, I offered to go for the milk; I had on a pretty white gown and my hair was becomingly arranged. It was not that I cared about the milkman, even though he was "different" from others, but because no girl would like to be remembered looking like a plumed hearse. I had the pleasure, on reaching the wagon, of being complimented on my appearance by the flirtatious milkman whom I detested.

Young men were very few in the village that Summer, and so my attention was attracted by this new variety of tradesmen. I soon discovered that he came only on the morning round, and if I was at home I would wander around to the kitchen about time he was due and offer, in the most artistically unconscious manner in the world, to get the milk.

Our conversation for some weeks was limited to "How much?" and "Two quarts, please," or "Only one quart this morning;" but one day, after a heavy thunderstorm, during which the lightning had struck a tree in our own yard, we broke through the trammels of trade and discussed electricity instead of milk.

I was charmed by his voice—low, cultured, pleasant. It was only an accident of birth which had given him such a voice, I told myself, but I confess it was most charming accident.

After that we chatted a few moments every morning. I am even afraid the people on the next block had to wait very often for their milk.

I used to take myself to task vigorously for my growing interest in this gray-eyed milkman, for I knew well enough that my position prevented my making a friend of him.

"Sylvia Russell," I said one morning, taking myself metaphorically by the shoulders, "how can you forget your mother?"

I couldn't fancy it, but no more could I imagine him committing a solecism were he invited, so strongly did he impress me as a gentleman, in spite of the milk cans.

However, my self-administered shaking led me to forego the pleasure of chating with him that morning, and to go for a walk to "the village" instead. As I strolled slowly along under the shadow of the high maples, I heard the milkman's bell, and, straightway my truant feet played me false and turned back in spite of me.

I heard a quick step behind me and then the voice of one of the "Summer visitors," a young man I had met a few weeks before.

"What a busy person you are, Miss Russell. You seem in great haste."

"Oh, good morning, Mr. Merriman," said I, slackening my pace. "I didn't know I was walking so rapidly. I am taking a walk for lack of other occupation."

"May I join you?" asked Mr. Merriman, timing his step to mine.

"Certainly," I returned, trying to look unconscious. The milk wagon was standing at the corner and the milkman, a tall, well-built fellow, stood looking up and down the street, evidently waiting for some one. My heart sank to my boots. Would he bow to me from that wretched wagon? I was ashamed of the thought, since the grocer and the butcher always bowed to me from their delivery wagons without disturbing me.

But I hated to have him there. It seemed no place for him; I wondered if he, too, was conscious of that. Then I turned hot and cold. The milkman gave one quick glance at me and my companion, and turned away without giving me an opportunity to bow. I

chance to rise." He said this with hardly becoming gravity, but I felt rebuked.

"Don't you think—if you were to try—you might?" I looked up, found his eyes on me, and couldn't go on, though he did not seem angry or hurt.

"I have been thinking of going to college soon," he said, after a moment's pause.

"Oh, how charming," I cried; "I am so glad for you. When—but the widow and children—your mother, you know, how can you?" Then I saw he was laughing.

"There is no widowed mother," he said.

"And no children?"

"And no children."

"Then you can go. But I thought you said—"

"Mr. Merriman said it!" he interruped.

"How did you know his name?" I inquired, curiously.

"I asked, of course. My tongue was given me for that purpose."

"Are you prepared for the exams?" I asked.

"Not—not quite," with a queer look.

"If I could help you," I suggested; "I've been to college myself. I'm very good in mathematics."

"Oh, thank you," he said, with what seemed overstrained enthusiasm. I'll get through all right, but if I should get stuck in a 'sum,' you'll help me out?"

"Yes, indeed. Do you study alone?"

"Quite alone."

"Isn't it awfully hard?"

"I'm afraid I couldn't study very well together." He gave me a quick look to see if I understood him. I pretended not to notice.

"I'm sorry to hurry you," I said, but don't you think Mrs. Morris is waiting for her milk?" He said something about Mrs. Morris under his breath, but prepared to drive on.

"I do so hope you will get on all right," I said. No one was in sight, and

was terribly hurt, and saw how foolish my pride for him was when it appeared in his actions, too. I did not hear what Mr. Merriman was saying; I only knew that the milkman had not spoken to me, and I, the Judge's daughter, felt like crying because of it.

"Rather a good-looking fellow, that milkman," remarked Mr. Merriman, carelessly. "I don't think I ever saw him before. He can't amount to much, driving a milk-cart at his age."

I realized the truth of this remark and felt provoked at my companion for making it.

"Perhaps he can't get anything else to do."

"He can't be very brilliant, then; but, of course, one doesn't expect much from people of that class."

"What class?"

"Why, his, of course. I had no idea you took so much interest in him," laughed Mr. Merriman, seeing my disapproving face. "I daresay he has a widowed mother with nine small children to support."

"Then you shouldn't make fun of him," I said, tartly. "There is no disgrace in driving a milk wagon well."

At my last word, Mr. Merriman shouted, and after a moment I laughed too, but I think he found me in rather a bad temper, though of course he did not connect it with the milkman, for he left me at our gate and did not suggest going in.

I ran to my room and locked the door and cried a little, though I had no idea why. "For, of course, Sylvia," I said to myself, "you don't care what a milkman does."

"You need not be afraid, Miss Russell," said the milkman next morning, of my speaking to you from the wagon when you are with friends. I have too much respect for myself."

"Oh, surely you don't think?" I stopped suddenly.

"I never think, Miss Russell. It takes all of my time to look after my widowed mother and the 12—or is it nine?—babies."

Then I knew he had heard Mr. Merriman. I blushed furiously and held up my hand for the pail. I think he saw I was hurt, for he touched my fingers gently as he gave it to me. His touch sent a thrill all through me, but I drew away my hand quickly. Just then Mrs. Sage and two young ladies drove by and stared rather inquisitively, I thought, with their eyes on the milkman, just for this little half-hour?"

"I always forget it," I said gently.

"You never do; you talk for a few moments and then you remember and you freeze at once. I don't blame you, but tell me—is that the only reason? If I were not a milkman, would you despise me still?"

"I don't despise you now."

"But I mean, do you think—do you think you could like me a little, Miss Russell—Sylvia—I must tell you—I have no right—but I love you. Don't be angry with me! I am going to-morrow. I could not help speaking—but you won't look at me! Are you so angry?" He put his hand pleadingly on my shoulder, & I could not answer him. I was so surprised, so happy. I only turned my check against his hand. He seemed astounded for a moment, then caught me in his arms.

"Sylvia, Sylvia, darling."

We didn't say much for a while, but by and by he said: "Sylvia, do you hear a seven-blow?"

I thought I could endure anything with his arms around me, but a vision of the widow and nine children suddenly loomed up in the distance, and I said faintly:

"I don't know."

"Try, dear. It's this: I don't think you quite understand about me. Sylvia, you see, I'm not a milkman."

"Not a milkman!" I echoed.

"You see, I offered to drive the milk-wagon one day when Smith was ill. I board there, you know. It wasn't much fun until a little woman, with an asparagus plume in her hair, came prancing down the path for the milk."

"But—but—afterwards?"

"Oh, afterwards. I borrowed the milk-wagon at the corner every morning and drove it a block. I wasted a great deal of time, Sylvia."

"Then what are you?" I gasped, holding his arm tightly.

"Only a professor," he said, with mock humility.

"Of what?"

"Mathematics."

"Where?"

"At X. College."

"Then you have cheated me. I'll never forgive you." I drew away from him and began to sob.

"Please forgive me."

"A professor," I repeated amid my tears.

"Sylvia, don't cry! What is the trouble? I thought you would be pleased, Sylvia." He was plainly nonplussed, though he tried to soothe me in the sweetest way, but I would none of him.

"A professor of mathematics and I offered to help you with your 'sums.' How could you?" I wailed.

"And so you shall, Sylvia; you shall do them all if you like. Don't be angry any more, Sylvia. I'm going to-morrow."

"Must you go?" I cried, putting out my hand to him, and so I tacitly agreed to help him with all his sums.

When the children came from the shore, the ex-milkman packed a couple of very sleepy children, a very empty hamper, and a very happy girl into the phaeton ready for the drive home.

"I'll see the Judge in the morning, sweetheart," he said, and gave my hand a tiny squeeze as he handed me the reins and bade me "Good-night!"—Short Stories.

"I don't know," he said. "Don't you want me to?"

This way carrying war into the enemy's camp with a vengeance. It fairly took away my breath.

"I don't know why I should want you to do, or not to do, things," I said, stiffly. "It was only on your own account."

"You should not, only—I thought, perhaps." He hesitated, looked a little hurt.

"It don't seem a very lofty occupation," I said, grammatically.

"But the widow and eleven babies, you know. They don't give a man a

moment, for she was rather shy with strangers, but was soon amicably offering him an arm of her fried man.

While he was dismembering the victim, I stole a glance at him.

He looked thoroughly high-bred; his clothes were loose, but of fine material and unquestionably well-cut; his shoes and the feet within them were faultless in size and shape, though the shoes were rather the wear for hurt.

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The Physiology of Love.
Now that I've won the maiden's heart
The fact to me is clear—
To win her hand I'll have to try
To win her father's ear.

Puck.

Labor-Saving Device.
Bridget (looking in the window)—
You're the new girl here; how do ye
like yer place?



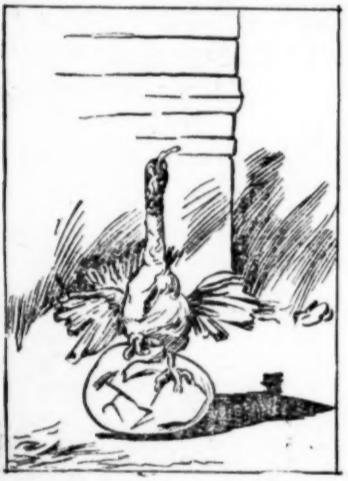
Delia—Sure it's 'oine! Look at the
labor-savin' inventions they do be havin'
to swipe with!



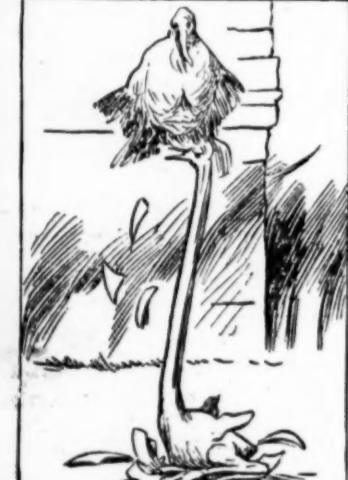
Bridget (in her own domicile, cutting
swathe from the Persian rug)—An' that
machein layin' in the yard the last
three weeks an' me not knowin' the use
of it.



"I'll just take a quiet little hatch."



"Goodness gracious! Something's movin'.



"Well, bless my Thanksgiving soul,
if I haven't been raising an ostrich!"—
Truth.

The Bottle of Bait.
He—Those men have not been fishing
long.

She—How do you know?
He—The bottle is quite full.—Yankee
Blade.

Our Length of Days.
Teacher—Now, Robbie, you may tell
us when the days are longest.

Robbie—When we have to carry coal
instead of goin' skatin'.

He was Like the Rest.
She was a handsome blonde, leading
a pet dog up Fifth Avenue. An ex-
quisite masher smiled a chimpanzee
smile as she passed the Windsor Hotel,
and said:

"Madam, I envy your dog."

"So do all the other puppies," was
her quick response, and he pulled up
his coat collar and took the nearest side
street.

THE ORCHARD.

Cullings.

An excellent quality of champagne is
made from pears in Florida.

It is believed that the English walnut
can be profitably grown anywhere
south of Mason and Dixon's Line.

The Kieffer is especially productive
and liable to set much more fruit than it
can bring to full size. Often they are
quite small, almost too small for market.
To make it a salable and profitable
market pear, it will need thorough
thinning.

There is hardly a farm on which there
are not more or less worthless fruit trees
which could be changed into desirable
ones by top grafting. Mark such trees
before it is forgotten, and prepare grafts
during the Winter for setting on in the
Spring.

Don't be in too great a hurry to dis-
pose of your fruit, and especially super-
ior apples. Those who have facilities
for keeping fruit can make a much lar-
ger profit by holding their choice prod-
ucts for the higher prices that can be
obtained later in the season.

Well, I tho't I'd put in a few seeds,
too. So I got an ear of corn and shelled
it and planted six of the kernels in the
herbaryum along with the other seeds.

"Byby, after the ferns and pansies
and that sort of stuff had begun to grow,
one day the six green shoots poked their
way up thro' the dirt, and when my
sister she seen them—my! wasn't she
astonished! She was tickled, too, as
could be, an' she went an' called mother
to come and look.

"Well, they wuz both so tickled that
they used to watch them shoots every
day and wonder what made them grow
so fast. They was pleased, too, as any-
thing, 'cause they said they must be
something rare. Mother said it must be
some queer kind of a fern, because it
growed so, and sister she thought it was
some kind of a grass.

"Well, when I seen that the shoots
was a growin' to look like cornstalks I
began to get scared, 'cause I knew they
couldn't be pulled out without tearing up
everything else in the box, and I knew
that if they were left there to grow
they would crowd everything out. So
every time ma 'n' sister went to look at
'em I just lit out.

"Well, a few nights ago we had a
party, and ma was showing her her-
baryum to everybody and was awful proud
of it and wanted everybody to notice
particularly the six splendid big grasses
that neither she nor sister had planted,
an' tellin' em all as how they must be
some rare plants.

"I was a-feelin' uneasy all the time,
tho' I tho't I'd die a-laflin'. Bineby ma
she comes along with old Mr. Atkins,
who owns a big farm, out in Jersey, an'
she sez to him that they hadn't planted
them, neither sister nor she, and that
they must be something uncommon.
Old Mr. Atkins, he gave one look, and
then he commenced to laff, and he laffed
and laffed till he liked to die. He
laffed till he choked an' the tears run
down his cheeks an' he got red in the
face.

"Ma got red in the face, too, an' I
could see she was mad as anything.

"Rare! I'ez old Mr. Atkins as soon
as he could speak. 'Uncommon! You
just cum over to Jersey to my farm next
Summer,' sez he, 'and I'll show you
aces of them rare grasses. It's corn,'
sez he, and then he nearly had a fit.

"Ma' n' sister were just crazy, and
p'raps I didn't catch it—O, no! But
the wurst of it was that it went all over
the neighborhood how they had been
growin' corn in their herbaryum, and
when ma learned of that, why, I caught
it again.

"But they had to pull the corn up
and plant the herbaryum over again,
that's one comfort," and the small boy
went and sat down in a snowbank and
whistled shrilly.—Exchange.

A Different Locality.

Judge Tighe—Were you struck in
the melee?

Jiggy McDuff—Naw, I was hit in the
neck.—Brooklyn Eagle.

Hiss Forte.

Recently a letter of introduction was
handed by an actor to a manager, which
described the presenter as an actor of
much merit, and concluded: "He plays
Virginia, Richelieu, Hamlet, Shylock,
and Billiards. He plays billiards the
best."

The Same the World Over.

Wife—I mended the hole in your
waistcoat pocket last night after you had
gone to bed. I am a careful little
woman, am I not?

Husband—Yes; but how did you
know there was a hole in my waistcoat
pocket?—Journal de Douai.

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long.

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street.

Tree Blight.

EDITOR AMERICAN FARMER: I
note in the August number of THE
AMERICAN FARMER you say "twig
blight, affecting apple trees, has been
extraordinarily prevalent this season.
It is difficult to say what causes the
malady." I must say I was surprised when
I saw that statement, as I supposed the
horticulturists had long ago informed the
people what it was that caused the blight.

I also noticed in the September
number of THE AMERICAN FARMER
another statement, from J. S. H.
Bowman's Bluff, N. C., answered by
Gerald McCarthy, Botanist, N. C., in
which he says there is no remedy except
the destruction of the affected
parts.

Now, I know nothing about these
great, big, long names for very small
insect, but I do know that it is a very
small insect that does the mischief,
and if anyone will watch the leaves on
the young twigs, and as soon as they begin
to curl down from the point of the
leaf you may be sure the pest is there.

Now, if you wish to be convinced of what
it is that kills the twigs, just look on
the under side of the leaves that are
curled down (and look sharp, too, for
they will get away very quickly), there
you will find the very small insect with
a great big name that does the mischief.

Two years ago I was talking with an
old gentleman, who belongs to the
horticultural society here, about this matter,
and I asked him if he knew what it was.

He said he did not, but it was blight. I
told him I thought not. He said the
society had decided that it was. I asked
him if he had any trees affected. He said
he had. I told him if he would show me
a tree that was affected, I would show
him the cause. He said he did not think
I could.

So we went to his orchard and found a
tree with the leaves curled down, and we
turned several leaves before we found
anything, and he began to think I was
mistaken; but we soon found a number
of leaves that had them. But they are
so small, and so near the color of the
leaf, and they get away so quickly, that
a person has to look sharp and quick to
see them. And now for the remedy.

I have but a few trees. I took a piece
of gas-pipe two feet long and made a
squirt-gun of it. Then I got some London
purple, and I put two teaspoonsfuls of
it in about two-thirds of a teacupful of
water, and let it stand over night. Then
I put that into 16 gallons of water, and
let it stand about 24 hours, stirring it
several times. Then I took my squirt-gun
and sprayed the trees shooting it up
under the leaves as much as possible.

I have done this for three years, and I think
it is a good effect. The trees need to be sprayed as
soon as they are few houses to-day in
Belgium upon whose southern exposed
sides trees are not trained. No chateau
is too grand, and no cottage too humble,
to furnish them protection and support.

Consul Smith says that last Summer
he saw ripening upon the gable end of a
town house, a surface of about 30 feet
square, over 2,300 peaches, and every
one of them larger than a hen's egg.

There were four trees, two of them with
dwarf stems, not more than 12 inches
high, and branches six feet long, radiating
like the ribs of a fan, and two "riders,"
or bushes grafted upon tall stocks,
whose boughs began to spread where
the others terminated. At the time of
flowering, it is always necessary to
shield the buds from the action of
frost, and this is done by various methods,
the best of which experience has shown
to be the placing, among the upper
boughs of the trees, of branches cut from
other green trees. This plan has been
attended by good results, though it should
be employed with great caution, as too
much shade is apt to stifle the germs, by
excluding the rays of the sun. Another
method, until recently very much in
vogue, and always effective, is the em-
ployment of mosquito netting, or other
cheap material with meshes large enough
to admit the free passage of light and air.

The old custom of using closely-woven
cloth, like table or bed linen, at night,
and removing it in the morning, is said to
be more dangerous than the frost itself,
as the trees at this season cannot
be deprived of air without serious injury.

In addition, this artificial heat at night,
succeeded by the warmth of the sun,
hastens their blowing, when the object is
to delay it as long as possible. Shading
at noon is sometimes as essential as covering
at night. The poor succeed very
well in protecting their fruit, by placing
a number of horizontal poles about 18
inches apart, and from four to six inches
from the trees, and covering them with
light wisps of straw. In good situations,
penthouses will sometimes suffice to pro-
tect the fruit; in any case, they are ex-
tremely useful in checking the flow of
sap. Since 1876, the following addition
to this method has made assurance
doubly sure: A fringe, made of un-
thrashed rye straw, by tying the cut ends
of the stalk together with twine or cord,
six or eight inches between the wisps, is
attached to a pole and suspended under
the eaves of the penthouse and in front
of the trees. The texture being open,
it does not prevent the light and air from
reaching the buds. These shields are
usually placed in position about the 1st
of March, and are not removed, except
in cloudy weather, until all danger from
frost has passed.

The borers newly hatched, will not
have penetrated far into the stem and
may be found near the bottom, where
the dust made by the sharp teeth of the
larvae will be found. A little digging
with a small, sharp gouge will bring the
grubs to light and thus prevent whole
Winter's damage by the insects in boring
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